THE

AMERICAN FARMER,

AND

SPIRIT OF THE AGRICULTURAL JOURNALS OF THE DAY.

"O FORTUNATOS NIMIUM SUA SI BONA NORINT
"AGRICOLAS." . . . . *Virg.*

Vol. IV. **BALTIMORE, JUNE, 1849.** **No. 12.**

WORK FOR JUNE.

In opening our remarks upon the labors of this month, we are gratified to be able to congratulate our agricultural friends upon the fact, that the consumption of corn in England not only holds its own, but continues to find favor. We advanced the belief that such would be the case, two years ago; and we are pleased to find our prediction thus far verified. And we are equally certain that each succeeding year will tend to increase the demand for it in that quarter, as the more the people of England and Ireland become used to it, the more will its virtues commend it to their acceptance, as a substitute for other breadstuffs, and as a fattener alike of their beeves, sheep and hogs. But, as corn and corn meal both contain large quantities of water in their elements, and are, therefore, liable to be excited into an injurious decomposition, by the dampness consequent upon a sea voyage, neither of these productions should be exported without undergoing the process of kiln drying.

With these brief prefatory remarks, let us proceed to call attention to the work claiming prompt notice

ON THE FARM.

Corn.—It should be the pride of the corn planter, as it certainly is his interest, to keep his corn field entirely free from weeds and grass, from this until he lays it by, as, without cleanly culture, much of the fertilizing matter of his soil will be abstracted by worthless intruders, which should have been appropriated to the nurture of his corn plants; and, as all will admit, without such culture, the pores of the earth cannot be kept open to drink in the enriching gases of the air, the dew and the rain. So firmly are we impressed with the value of an open soil to the product of corn, that, in a 50 or 100 acre field, we would scarcely ever have the *cultivator* out of it from the time of the first dressing until we had completed its culture.

In connection with this subject, we will remark, that if there is any corn planter who was unable to manure his ground at the time of preparing it for his crop, he should leave no effort untried to give it a top-dressing on the hill—a composition comprised of 5 bushels of ashes and 1 of plaster—one comprised of 5 bushels of ashes, 2 of ground bones, and 1 of plaster—one of 300 lbs. of agricultural salts, or one comprised of 4 loads of woods mould and 5 of lime, if applied on the hills, per acre, will tend greatly to increase the yield of his crop.

Mangel Wurtzel, Sugar Beet, Carrots and Parsnips.—These roots may still be put in up to the 10th of this month, with a full reliance of a good remunerating crop, provided the ground be put in proper order and is well manured, as recommended in our last month's notice.

Ruta-baga.—About the 25th of this month will be a good time to put in this excellent root; but the sowing of the seed should not be delayed beyond the 25th of July.

Preparation of the Ground.—The ground should be ploughed deeply; prior to which, however, where its improvement is looked to as a main object, it should be well manured, broadcast. The ploughing done, it should be harrowed thoroughly, so as to reduce the soil to a fine tilth, and then rolled. If manure is scarce, manuring in the ridges will answer, and, of course, require much less manure. It would be best to give the ground two ploughings. The ground being ready, make ridges, say 15 inches apart, 4 inches deep; put in the compost hereafter recommended, about 2 inches in depth; cover the compost with the soil thrown out in making the ridges; drill in the seed on the top of the drills; rake them in lightly, and compress the earth with the back of the rake or with a hand roller.

Quantity of Seed per Acre.—Two pounds per acre is about the right quantity of seed.

Preparation of the Seed.—Soak the seed in fish oil, for at least 12 hours before drilling them in. When ready, drain off the oil, and mix the seed thoroughly with ashes or plaster, so as to separate and render them easy of being sowed; then add 3 parts sand to one of seed, so as the better to ensure their being thinly distributed in the drills.

Culture.—When the plants first come up, go through your patch and sprinkle *fish oil* over them, taking care to have them dusted, at the same time, with either plaster or ashes. This operation must be repeated, early, for three or four successive mornings. When the plants *begin to bottle*, give the ground a dressing with the hoe; and if so thick as to impede their growth, thin them out a little. In a week or ten days thereafter, give them a second stirring with the hoe, taking care, at this working,

to thin out the plants so as to stand from 6 to 8 inches apart in the drills. In about two weeks from the second, give them a third stirring with the hoe. This, under ordinary circumstances, will answer to ensure a good crop; but, as the great object in the culture of this root is to keep the ground open and free from weeds, the cultivator must exercise his own judgment, in determining whether he give his ground another working or not.

Of the Manure.—Well rotted stable or barn-yard manure is, probably, the best foundation for a compost; 6 loads of which, if mixed with 10 bushels of ashes, and 4 of ground bones, and 1 of plaster, will be sufficient for an acre, and will not fail, the season being favorable, to ensure a heavy crop of roots. Where the culturist may not have rotten manure, he may secure himself a good crop by making a compost of 10 bushels of ground bones, 10 bushels of ashes and 1 of plaster, or by drilling in 200 lbs. of guano and 1 bushel of plaster.

Of the Ground.—The soil in which this turnip most delights is a deep sandy loam, though it will grow well in any light, friable soil—the fresher, the better.

Fall Potatoes.—If you did not get your potatoes in last month, make it a point of duty to get them in by the 10th of this; and, having planted them, be sure to so cultivate them so as that the grass and weeds don't rob the tubers of their food. Dust the vines once or twice with a mixture comprisd of 2 parts ashes, 1 part lime, and 1 part salt.

Pumpkins.—Though a month behind the time, pumpkins may still be put in up to the 10th of this month.

Milch Cows.—If you have a good pasture on your farm—and you ought to have—that will afford you the best possible resource for food for your milch cows and other stock through the summer; but as the secretion of milk cannot be promoted through winter and early spring without *succulent* food, you should, for every five head, put in an acre of roots; and as a *change* is good, occasionally, you would do well to have a portion of your root ground occupied by mangel wurtzel, sugar beet, carrots, parsnips and ruta-baga. An acre apportioned in these roots, would give you half a bushel a day, for each of your five milch cows, from the first of November till the first of May. 4 acres, well tended, would secure ample *succulent* food for 20 milch cows during the period named above, and would keep your cows in milk during winter and spring. We need hardly add, that the cows must also receive their regular supplies of long feed.

Broadcast Corn.—Now, as we are talking to you of the winter feed of your cows, the occasion seems to be an opportune one for us to suggest to you the propriety of putting in an acre or so of corn, sown broadcast, to supply the deficiency of your pastures in August and September.

Millet.—If your resource for hay is limited, or if it should be the case that you raise no good hay grass, put in a few acres of millet, and you will be sure to supply a most excellent hay for your horses, and plenty of it, provided you manure and prepare the ground well, as we advised you in our last month's work, to which we now respectfully refer you.

Cutting and Curing Clover Hay.—Clover should be cut as soon as it comes into *blossom;* and after laying in the *swarth* until it wilts, it should be put into *cocks*, to complete the curing. In stacking it away, a *peck of salt* should be sprinkled over each ton of the hay, as it is being formed into stack. If thus cured, and this precaution of salting be observed, the hay will be greener, more fragrant, and less liable to lose its leaves on being subsequently handled, in being fed out to the stock, and, withal, will be much more grateful to their palates. If the further precaution were taken to stack, layer and layer about, *straw* with the clover hay, the former would imbibe the fragrance of the latter, and be as acceptable, if not as nutricious, to the cattle as the clover hay itself. This might occasion a little *extra trouble*, but when one is securing a winter supply of provender for his stock, that consideration should not be permitted to weigh a grain in the balance; for, independent of the pecuniary benefit which is sure to enure to the careful husbandman who may encounter this additional trouble, that higher and more ennobling sentiment, arising from the humanity of the thing, should, and will, more than compensate him, as there is nothing which brings a richer reward to the virtuous breast than the consciousness of its possessor having performed his whole duty.

Harvesting.—As harvesting will take place in a large area of country in which our paper circulates before its next appearance, we seize the opportunity to offer a few words of advice. Let the wheat be *cut before it is dead ripe*—cut it at that juncture of time when the stalk, for one or two inches *just below the head*, has turned yellow and become brittle. Provide *ample force*, so that you may get your crop down in good time. Provide a good supply of tools and implements, and see that they are kept in the best possible order. Provide good fare for your hands; treat them kindly, but be sure to *superintend* their labors yourself, and *see* that they faithfully do their duty. After your crop is cut down, see that it is so cared for as to be placed in a condition to receive no injury from the effects of rain, and, when sufficiently dry for the purpose, that it be either housed or so stacked as that the rain cannot harm it. The value of many a good crop of grain has been seriously lessened by the slovenly manner in which it was managed after it was cut down. The proprietor, however, may obviate such consequences, by *personally attending to his own interests*, and exacting justice from his hands. No man should do any thing through an agent which he can do of himself: no eyes exert so wholesome an influence over the labor of an estate as those of the owner.

Winter Turnips.—Have you selected your ground for your winter turnip patch? If you have, plough it up, at once, and, if possible, subsoil it; that done, harrow and roll it, and let it lay until about the 20th of July; then haul on your manure; plough it in; harrow and cross harrow it. On or about the 25th of July, sow your turnip seed; spread over it, per acre, 20 bushels of ashes, and 10 bushels of lime; *lightly* harrow in the seed, and roll your ground.

You may rest assured that by giving your turnip ground two ploughings and one subsoiling, you will greatly increase the crop; and upon this you may rely, that 20 bushels of bones, 10 bushels of ashes, and 1 bushel of plaster, will give you just as large a yield as would 20 double horse cart loads of stable or barn yard manure. If you have not manure on hand, go to work, at once, and procure it.

Buckwheat.—Some time during this month sow a few acres of buckwheat—some for sale, and the rest for the use of your family; for no farmer's family should be without buckwheat cakes on his breakfast table in winter. Buckwheat, as most farmers know, makes a most delicious cake; chopt and fed

to milch cows, with cut straw or hay, it is one of the best substances to be found to promote the secretion of milk; as an *alterative food*, when chopt and mixed with cut straw or hay, it forms one of the most serviceable mashes that can be given to horses; ground into meal and boiled into slop, it is excellent for hogs; the grain fed to hens, occasionally, in winter, promotes their laying, and, if fed to them while they are moulting, aids them in shedding their feathers; while the straw, if properly cured and taken care of, makes excellent provender for milch cows, better than straw, and worth more than half as much as the best hay.

A bushel of seed to the acre should be sown. It will, with the aid of 10 bushels of ashes and 1 of plaster, per acre, yield a very fair crop on even poor light soil; if assisted with 10 bushels of ground bones, such land will yield from 30 to 40 bushels of grain, and leave the soil in a condition to bear a good crop of wheat, to be followed by clover.

Harvest Tools and Implements, and Harvest Supplies.—Among the first duties of the farmer, in the early part of this month, should be that of attending to his harvest tools and implements; he should make a careful personal examination of those he has, and see that those which may need it, are, *forthwith*, thoroughly repaired. If, on making his examination, he finds that his supply is not sufficient, he should go at once and buy whatever he may need, and be sure to select the *best*, as they are generally the cheapest in the long run. While attending to the repairs and purchase of tools and implements, let him not forget to procure his *harvest supplies*, as one's hands work with more willing hearts and stalwart arms when their fare is good and generously dispensed to them. We are a believer in *economy*, but it is in that economy which, in its dispensation, warms up the human affections, strengthens the laborers' nerves and muscles, and inspires them with interest in their master or employer's welfare.

Materials for making Manure.—Improve every spare hour in collecting materials to form into manure or compost heaps, and be sure, when you have got them together, not to let their riches be taken away by sun, air and rain.

Draining.—All *wet* lands should be *drained*. When deprived of their excess of water, the capacity of such lands, for production, will be increased fully one-third; the products will be improved in quality; the lands will be much easier tilled, while the health of the estate will be greatly meliorated.

Meadows.—All meadows which have been nearly run out may be greatly increased in their product by the following management: After being mowed, and the hay cured and removed, spread on each acre 20 bushels of ashes and 5 of ground bones; harrow and cross harrow these in; then sow a peck of timothy seed to the acre; lightly harrow and roll; and you may thus renew your meadow without incurring the trouble and expense of ploughing, with the assurance that it would yield good crops of grass for several years.

A good Compost.—Those having *salt marshes* and *marl* on their estates cannot do better than to seize every occasion to form marsh mud and marl into composts for their next year's corn crop. Three hundred bushels of marl, mixed with 10 double horse cart loads of salt marsh mud, per acre, if formed into pie, and left to decompose, assimilate together, and be meliorated by the effects of the summer's sun and winter's frosts, will form, next spring, a reliable manure for the corn crop; the which should be followed by *wheat*, and that by *clover*. In thus preparing the material for composts, a hand and team could be very profitably employed from now until the period of frost. Such a compost, we feel very certain, would prove infinitely more permanent in its effects than twice the quantity of barn yard manure, and would ensure to the soil any desirable degree of fertility.

In closing our hints for the month, we may be permitted to hope that the harvests of the coming season, under divine Providence, may prove abundant—that good markets and remunerating prices reward the husbandman for his anxieties and his toils—and, above all else, that gratitude may abound in every rural heart towards the Great Source whence we all receive so many blessings.

MONTGOMERY COUNTY AGRICULTURAL SOCIETY.

WEDNESDAY, *March* 7, 1847.

The Society held its first Quarterly meeting this day, at the Court House, pursuant to adjournment. OTHO MAGRUDER, Esq. one of the Vice Presidents, was called to the Chair.

The Society having been called to order, the Committee on the improvement of Farms presented their report, with the accompaning certificates; which being read, were ordered to be received and placed on the file.

Further time was given to the Committee on Roads to make their report.

RICHARD J. BOWIE, Chairman of the Committee on Agricultural Education, read what he declared to be a hasty draft of his report, and, at his own request, was allowed further time to complete the same.

W. H. FARQUHAR, Esq. one of the five committeemen appointed to collect and report statistical information in regard to the waste and cultivated land of the county, made an introductory report, which was read and ordered to be received and placed on file; and GEORGE W. DAWSON, Esq. also of the same committee, verbally made known to the society, that he had made considerable progress in collecting materials for a report of his District, but not having completed his labor, asked and received further time to report.

And the society being informed of the death of THOMAS NEEL, of the same committee, apointed Dr. WASHINGTON WATERS to supply the vacancy occasioned by the death of Mr. Neel.

The Society ordered these proceedings, and the reports of the committees and the accompanying documents, to be published in the newspaper of the village, and in the American Farmer; and then adjourned to the First Monday of April next.

W. VEIRS BOUIC, Sec'y.

REPORTS.

Montgomery County Agricultural Society, September, 1848.

The Committee on the Improvement of Farms beg leave to report, that, after particular examination of the certificates presented to them from several gentlemen, they award to Mr. BENJAMIN HALLOWELL, for the greatest improvement in five acres of land, a Silver Goblet of the value of ten dollars

Also to Mr. EDWARD STABLER, for the second greatest improvement in ten acres of land, a Silver Goblet, of the value of five dollars.

Together with this report, we return the certificates of the above named gentlemen, to be disposed of as the Society may see fit; though we would suggest to have them published, that others may see what can be done on worn out land.

HORATIO TRUNDLE,
JOS. F. BAILEY.

A Lot of Five Acres, most of barren Rockland, (poor old field,) clay soil, stiff and stony.

In 1843, latter part of winter and early in the spring it was ploughed and limed, 50 bushels per acre; in May, 10 bushels of bone per acre was applied, and the field planted in corn, putting poudrette in the hill at the rate of one and a half barrels per acre. In September the corn was cut and hauled off, and the land dressed, one acre with guano, one with poudrette, and the rest with bone, at a cost of $8 per acre on the farm, and in wheat and timothy.

Cost of Manures.

250 bushels of Lime, - - -	$62 50
50 bushels bone, on the farm, - -	25 00
7 1-2 barrels poudrette, on farm, -	15 00
Manure for wheat, - - -	40 00
Plaster on grass, - - - -	2 25
Cost of putting in and cutting corn,	18 75
Putting in wheat, - - - -	11 25
Seed wheat, 10 bushels, - -	10 00
	$184 75

Crop.

Corn, 250 bushels, - - -	$125 00
Wheat, 100 bushels, - - -	112 35
Three crops of grass, 20 tons, -	200 00
Clover seed, 7 1-2 bushels, - -	37 50
	$474 85

The land now appears made, having on it a very large second crop of clover and timothy, both in head.

RICHARD S. KIRK, for
BENJAMIN HALLOWELL.

To the Committee to award the premium of the Agricultural Society of Montgomery County, for the greatest improvement in Land—reference being had to the cost, kind of manures employed, &c. &c.

The undersigned, in entering the lists of competition for the premium to be awarded by our Agricultural Society, and in pursuance of the "terms and conditions," will state, that the character of the land refered to, is a stiff, tenacious clay subsoil; and at the time of improving, and perhaps for fifty years preceding, the field alluded to, or the greater portion of it, at least, was reduced to a state of almost absolute sterility; not very good originally, "the old Maryland plan" of shallow tillage, little or no manure, no grass seed, and constant washing, had nearly divested it of the little soil it once possessed.

When it came into my possession, I made two unsuccessful attempts to improve it by cultivation, and sowing grass seed, and the liberal use of plaster. It produced little else than running briars and poverty grass.

About one-fourth of the field was of better quality, being lower and receiving the washings of the surrounding grounds; and although there was no running water on the surface, yet most of it was "wet and spongy" late in the spring, and produced but a scanty crop of very inferior grass.

Some nine years since, I determined to improve the field, cost what it might; and began by a thorough, under-draining of the wet portion, by several hundred yards of deep narrow ditches—filling them to within eighteen inches of the surface with loose stone; then a course of leaves or straw, to prevent the returned earth filling the interstices between the stones.

It was broken up in the fall and early in the winter, from seven to nine inches, much deeper than it was ever ploughed before. The following spring, applied about sixty bushels of caustic lime to the acre, and planted in corn. On about three-quarters of the field, the crop did not more than pay for the ploughing, if so much. Oats followed the ensuing spring, with a liberal supply of grass seed, as it was considered useless to attempt a crop of wheat. Much of the oats was too short to harvest, and most of the grass seed either failed to vegetate or "starved out."

In six or seven years, the field again coming into rotation, was broken up quite as deep as before; the same amount of caustic lime (i. e. in an unslacked state) applied, well incorporated with the soil, and again planted in corn. This crop, though considerably injured by the bud worm, was good; not measured, but estimated at not less than six to seven barrels to the acre—the former crop not yielding as many *bushels*.

Oats again followed the corn, on about two-thirds of the field, with five to six bushels of ground bones to the acre, and lodging over the greater portion of the field. Then followed a wheat crop on the whole; manured, as far as could be, from the barn yard, and on the balance, some 80 to 100 pounds of guano to the acre—sowing timothy seed with the wheat, and clover seed the spring following.

The average yield of wheat, to the acre, was rather over thirty-three bushels. This result is ascertained with certainty; for every field and lot on the farm is accurately surveyed and plotted, and this portion of the crop was threshed and measured by itself.

Most of the crop on this field (about ten acres within the enclosure, and eight in wheat) suffered considerably from drought early last spring; and the harvesting was badly done, owing to its fallen and tangled state, from a storm, about the time of ripening; but I have no doubt several contiguous acres might have been selected on the lowest ground, that would have yielded over forty bushels to the acre. This field was gleaned with the horse rake and hogs, but sufficient seed remained to produce a volunteer crop of wheat with the grass this season, that was generally estimated by those who saw it as well worth harvesting.

This season, this field yielded the heaviest crop of grass I ever harvested; and even on what was originally the poorest part, has now a luxuriant crop of second growth clover, intended for seed, that is lodging over the whole extent.

We will estimate the "profit and loss," by figures, for a single acre:

By estimated increase of corn crop, solely owing to lime, at least 6 bbls., at $2,	$12 00
By estimated increase of oat crop, at least 20 bushels, at 40 cts.,	8 00
By estimated increase of grass crop, at least one ton,	10 00
By estimated value clover seed, at least 1 1-2 bushels, for there would have been none without the lime, at $4,	6 00
Thirty-three bushels of wheat, average price sold at last spring, $1.31,	43 23
Total,	$79 23

Dr.		
To 60 bushels of lime, cost at kiln 16 cents,	$9 60	
To 7 years interest, tho' it began to pay in pasture in less time,	4 03	
To 60 bushels of lime, cost at kiln 12½ cents,	7 50	
To three years' interest,	1 35	
To 6 bush. ground bones, at 50 cts.	3 00	
To 100 pounds guano,	2 00	
		$27 48
		$51 75

Making, in round numbers, fifty dollars an acre in favor of the improvement.*

In the view of some, perhaps, there should be a charge for hauling and spreading the lime; also, for harvesting the increased crops. It is believed the increased product in straw and fodder, more than repays the latter; whilst the former, and also the expense of draining, is fully compensated in the greatly increased pasture, to say nothing in the account of the state of the land itself, which is *radically and permanently* improved.

Previous to the application of lime, plaster was liberally used, but with no visible effect whatever. Now its action is as marked, on the *same* land, as I have ever seen any where: and with the exercise of a very ordinary degree of judgment, the improvement may be continued and increased, with but very little additional expense, for many years to come.

In connexion with the above statement, I would remark, incidentally, that it is probable a fair crop of wheat might have been raised on this land by the aid of guano alone, and at less expense than has been incurred; but according to all the experience I have had, and I have used it liberally, the *land* would have derived no material benefit.

On land which was limed eighteen or twenty years ago, and equally poor, (purposely kept without other manure since, to test its durability) it has rendered it very productive, comparatively speaking, to this day. Whilst on a portion of the same, with 400 lbs. of guano to the acre—half in 1845, and the balance in 1846—and equally cropped, no one could point, by the growth of the clover—uniformly good on the whole, and equally limed—where the guano had, and where it had not, been used. With me, in two, or at most, three years, its effect is gone. The conclusion is, that lime, though it may be comparatively *slow*, is *sure*; and to say the least, is, on this description of soil, ten times as durable as guano in its fertilizing effects: how much longer remains to be seen; and in the end, is much the most economical, where it can be obtained at a reasonable cost. Guano may generally be used to profit for a single crop, and possibly may prove more durable in its effects on some kinds of soils, than on others: but on *all* soils, it is believed an advantage would result in mixing it with one-fourth to one-third its bulk of plaster, to fix and retain the ammonia; and to *plough* it in, instead of leaving it near the surface. Lime, on the contrary, losing nothing by atmospheric influence, should be kept near the surface; and is best applied as a *top dressing* (which guano never should be) a year or two in advance of the cultivation, to afford an opportunity for the winter's frosts and rains to dissolve and bring it into more extended and speedy action.

Ground bones, although not so immediate in their effects, are much more durable than guano, and to be preferred, decidedly, where the improvement of the land is a primary object. I would class them something like the following: Lime for the landlord; guano for the tenant, and ground bones for both; *after* each has fully availed himself of all his own resources, in the vegetable manures.

The annexed certificate is the only kind of collateral evidence I can now furnish; not having contemplated any thing of this kind at the time of harvesting the wheat last season, or of determining, with precision, the product of hay this year.

EDWARD STABLER.

Harewood, 8 mo. 31st, 1848.

☞ I have examined the within statement of EDWARD STABLER, and from a knowledge of the land for upwards of thirty years, having frequently in that time noticed the crops thereon, and having particularly examined the crop of wheat alluded to, while standing on the ground, and also the crop of grass now on it, have no doubt of the correctness of his statement; nor do I think it an over estimate, that several acres together produced quite forty bushels of wheat to the acre. WM. P. PALMER.

Woodlawn, Aug. 31, 1848.

To the Agricultural Society of Montgomery County:

The committee appointed at our last regular meeting, to collect statistical information in regard to the waste and cultivated lands in the County, consisted of five members, each of whom was to bring in a Report from his own District. What progress has been made in this undertaking by the other members of the Committee, I am not able to state, but suppose it will presently appear. In my own particular department, as confined to collecting the statistics of Berry's District, I am not going at present to offer any details. But being desirous to effect something toward the object of our appointment, I will venture, on the strength of my privilege as Chairman, to present an imperfect sketch, embracing the County generally, and which may be preliminary to a more perfect and detailed report at some future period.

In regard to the present condition and prospects of the Agriculture of our County, although very anxious to avoid puffing it up beyond its merits, and raising expectations in the minds of strangers, which an actual inspection could not fail to disappoint, I still deem there is much ground for encouragement. It is undeniable that a fresh spirit for the improvement of our County, has been awakened, amongst its citizens. Of the causes which have conspired to produce this result, first and foremost, is a thorough conviction of the necessity of the case. Reflecting men have perceived for some time, that our County was agoing backwards. In wealth and population, it has actually retrograded—a fact, which is felt the more painfully by contrast with the rapidly growing prospects of some other sections. And this decline must, from the nature of things, go on with accelerated motion, unless there is a change in the measures that have given this down-hill direction. This idea is insupportable to every one possessing the

*This estimate is by no means a forced one. The actual increase of crops was considerably over the amount assumed; and if a fair average was made of the wheat, in the joint crop of oats and wheat, it would increase the aggregate result some five or six dollars more per acre. No charge is made for cost of ploughing and cultivation, for every one knows, or ought to know, that the cost is the same for poor land as it is for rich.

smallest portion of American spirit, to which *Progress* is as essential as air is to life. To stand still, in this age and country, is to go backward; and to go backward—hopelessly, irretrievably backward—better cease to be! A change, then, in the Montgomery system of Agriculture, was something that had to be made; and the people, far and wide, began to see its necessity. At the same time, the great cause of Agriculture was receiving an impulse every where. Science lent her powerful aid. The knowledge of improvement was diffused by means of Agricultural papers, and a fresh spirit of calculation was awkened by Agricultural Societies. Fortunately too, the discovery of new and powerful manures, and their importation and use in large quantities, came on at the same time, and gave to the minds of farmers, slow to believe, ocular demonstration that a practicable means of improvement to an extent almost unlimited, is now placed in their power.

The result has been that Montgomery has waked up, or at least, has given strong premonitory symptoms that she means to be awake some of these days, before long.

She is awaking to a sense of the necessity of making fresh exertion, and to a determination to make them. She is awaking to the knowledge of her own advantages of position, and the actual capabilities of her territory; and she desires that others may have an opportunity of becoming acquainted with those facts.—At this eventful epoch, when (to use the language of a distinguished Senator) "there has not been since the discovery of the new world by Columbus, such an unsettling of the foundation of society—when not merely individuals and companies, but communities and nations, are in motion," seeking some new and better place of abode, there seems to be a special propriety in presenting a view of the advantages which our county holds out to emigrants.—We cannot offer them those bright attractions which fancy imputes to some other regions of the world. We seek not to dazzle their eyes with the golden visions that sparkle before the eyes of the exiled adventurer to California.—Yet we have gold too, discovered within our borders: but of that it is not the intention at present, to speak. It is only those who are satisfied with the ordinary slow and sure methods of improving their condition, and are willing to undergo the labor necessary to effect that object in the way which the mass of the community must always pursue, that we would venture to invite to come amongst us. And for such, we believe there is not only ample room, but an inviting field for successful exertion.—Montgomery offers them a soil, which has been proven, even in the least favored localities, to be highly susceptible of improvement, and which may be procured in any situation, in any quantities, and at almost any price, that could be reasonably desired. She offers them too, one of the best, if not the very best, market for their produce that exists in this part of the United States.

It may properly fall within the province of the Committee to offer proof that the prices of produce in Washington City are better for the farmer, than in any of the neighboring cities: at present, we only refer to the fact. It is also unquestionable that our County has, from its position, naturally a better access to that market, and at all seasons, than any other adjoining territory. In regard to that important consideration of *health*, no one will undertake to deny that Montgomery is highly favored. Pure water and a salubrious atmosphere, those two great blessings which are denied to so large a portion of the fertile west, may be justly claimed as her precious and indefeasible possession.

There is another matter of too much importance to pass over without notice—an inducement which must always possess the greatest weight with all those whom we would most desire to come amongst us. We refer to the society of Montgomery. Your Committee think it is not arrogating too much for our county to put in considerable claims for it on this account. Occupying as it does, a central position among the counties of a state which holds a similar position in regard to the whole Union, it appears to your Committee that Montgomery combines to some extent, the merits of the two extremes. To the respect for industry and morality, which is often considered an especial characteristic of northern growth, it adds a fair share of the generous and hospitable qualities of the South. This claim may, at first sight, appear a boastful one. Your Committee believe, and not without deliberate observation and reflection, that it is founded in truth.

In order to present a condensed view of the agricultural condition of the county, the following statement is made out from the returns of the last census, showing the amount of the various agricultural products at the time the census was taken.

Crop of Montgomery County for 1840.

Bushels of	Wheat,	142,757
do	Barley,	870
do	Oats,	225,168
do	Rye,	27,704
do	Buckwheat,	2,638
do	Indian Corn,	398,385
do	Potatoes,	62,546
Pounds of	Wool,	29,816
do	Hops,	138
do	Wax,	290
Tons of	Hay,	4,428
do	Hemp and Flax,	5½
Pounds of	Tobacco,	1,088,412
do	Silk cocoons,	45
Cords of wood sold,		141
Value of products of Dairy,		$16,837
do	of Orchard,	9,585
Home made and family goods,		8,274
Market gardens,		3,924
Nurseries and Florists,		150

Gallons of wine made, 624; barrels of flour manufactured, 3,000; value of manufactures, $33,100; Population, 15,456.

Such was the estimate made of the several agricultural productions of the County in 1840. It will be of some interest to our farmers to preserve this table, and compare it with the results with which the next Census is soon to furnish.

We are sanguine in the belief that the agricultural improvement during the last ten years, has been wide and general If we estimate the addition to the wheat crop from the use of Guano alone, at the rate of 100 bushels of wheat added for every ton of guano used (which is believed to be a well authorized assumption) there would be a gain of 20,000 bushels in that important staple from the use of that single foreign substance.

Estimating the crop as shown in the above table, at fair average prices, the whole annual value of the agricultural productions of the County, at that period, was something over $600,000.

The Commissioners' books show 308,562 acres of land, valued at $2,801,888, being a little over 9 dollars an acre but there is considerably more in the

County than is shown. From the valuation, a considerable deduction must be made for real property in villages, manufactories, &c., not used for agricultural purposes. If the value of stock, implements, &c., be then added to the actual value of the land, we shall have an *Agricultural Capital* for this County of some 3 millions of dollars. Now since the annual value of the agricultural products appears to be at least $600,000, we thus obtain a yield of 20 per cent —a pretty fair annual per centage on the capital for Montgomery farming.

But this ought to be increased many fold. Of the lands professed to be farmed at all, it may safely be said, they are not more than half tilled; and from the best information we can obtain, it is safe to say that fully one half the land of the County is waste, and not cultivated in any way. This vast body of 150,000 acres is for the most part, beautifully situated for the purposes of cultivation, and with the addition of a minute quantity of certain minerals which may be furnished by bone, guano, chemical salts, &c., has been proved to be capable of producing large crops, at once. When the price at which these lands can be bought, ranging from $1 50 to $10 00 per acre, is taken into view, together with the facilities of access to a first rate market, and other advantages before hinted at, it is believed that they offer a really inviting opportunity for persons possessing some capital, and desirous of engaging in the pursuit of agriculture—persons, who are not "in haste to get rich"—who can look before the present moment of time and beneath the surface of the soil.

A part of the duties entrusted to this Committee, was to point out the location of the various bodies of land which are for sale over the County, the prices at which they could be procured, the roads by which they can best be reached, and the advantages of situation with regard to villages, mills, schools, &c. For this purpose, it would be requisite to examine the County in detail, which would occupy more time than your Committee have had to devote to the subject, and require a consultation and co-operation of all its members, for which there has not been fitting opportunity. It would also extend the report to an inconvenient length; and I am well convinced that any thing addressed to the farming community, if it mean to be useful, must be brief. These topics may form a proper subject for a continuation of the report at future meetings. But I will here take occasion to say, that this part of our object could be accomplished with better effect, if the writers and readers of such a report could have access to a correct map of the County. This is a desideratum which is believed to be closely connected with a proper understanding of the subjects committed to us for examination, and with the interests of the citizens of the County generally.

I have now presented a statement embracing a few matters relating to the condition of our County, and referred briefly to some of the inducements it offers for persons anxious to engage in agricultural pursuits, to come and settle amongst us. We are satisfied that enterprising settlers from other sections of our own, or from foreign countries, if they come properly prepared, may do well here for themselves; and their presence and example may be useful to us. We shall rejoice to welcome such, and have them join with us in the noble career of agricultural improvement. But in holding out these views, it seems to be consistent with our duty and with propriety, to admonish the citizens of Montgomery, that for the great purpose of elevating the agricultural character of their County, they must look mainly to themselves. That people which folds its own hands, and looks abroad for aid, rarely receives it; or if aid comes, it is often in a form not relished or desired. Such are the lessons of all past history, and let us not be blind to them. Our citizens must put their own shoulders to the wheel, and urge vigorously forward every measure which experience proves to be conducive to improvement. Let us have better roads—better schools; [the highly respectable committees appointed by you to report upon these subjects, will, I hope, tell us *how*]: let us correct our own erroneous practices, and right our own wrongs, and, if farmers may be allowed to quote Poetry, when it conveys a great idea better than can be done in prose, we close the present imperfect sketch with the admonition paraphrased from the most glowing of Poets—the great Peasant Bard:

"Be Southron still to Southron true,
Among ourselves united,
For never but by Southern hands
Shall Southern wrongs be righted."

W. H. FARQUHAR, Ch'n.

PERSIAN TOBACCO SEED.—We are indebted to Mr. *C. Eaton*, of this city, for a package of the seed described in the accompanying note. We have placed the same in the State Society's hall, and will, with great pleasure, distribute it in accordance with the wishes of the donor. The example of Mr. E. is worthy of imitation. We are in a position now to be of much service to the farming community, and to the country generally, by the dissemination of seeds, &c., which may be introduced from other States and foreign countries; and we earnestly appeal to officers of the navy, merchants, and captains and supercargoes of vessels, to aid us in our endeavors to extend the usefulness of our society:

TUMBECKEY, OR PERSIAN TOBACCO SEED, of 1848. —This Tobacco is cultivated in the vicinity of *Shiraz*, Persia. The amount brought to Constantinople, where it is exchanged for British manufactures, is very considerable. My friend writes:

"In 1847, I was at *Erzerown*, and I saw immense numbers of horses and mules loaded, certainly 2,000 to 3,000. If it could be produced in the U. States, and sent here, it would become a better article of commerce than even sugar or coffee; for you know that though a Mussulman can go without the latter, he must *desigeur*, have his pipe. The *Narguile* is quite as universal as the *Tcibbouk*, and quite as much used."

This tobacco is used for the Narguile or water pipe, of which there are several varieties, exclusively.

Mr. Sands will be good enough to distribute the seed to the tobacco growers among the subscribers of the American Farmer. E.

Baltimore, May 4, 1849.

A letter from a gentleman of Amherst Co., Va., ordering the Farmer, remarks, that he had had an opportunity of examining a volume of the work, and adds:

"The American Farmer is, unquestionably, the most *practical* agricultural periodical issued in the United States, and hence supplies a desideratum which the tillers of the soil have long asked for in vain. This feature in your laudable enterprise will command success, as soon as it is sufficiently known, and, at no distant period, will make it the most useful to agriculturists, and the most profitable to the editor, of the countless multitude now circulating in our country."

ON THE CONSTRUCTION OF LIME KILNS, &c.

HAREWOOD, 1 Mo., 12, 1849.

Esteemed friend F. P. Blair:

I avail myself of the first leisure hour to comply with my promise of giving a sketch of my recent visit to the upper districts of our county; and although residing, for many years, within twenty-five or thirty miles, I only visited this section last month, and for the first time, at the request of some of the citizens who desired to join our Mutual Insurance Company. It was most gratifying to witness the extended spirit of enterprise, and good farming, that greets the eye of the traveller—*not yet* everywhere, but in very many instances; nor was it less so, to receive the kind and hospitable welcome which met me at every turn.

The "river bottoms" of the Potomac have been long and justly famed for their fertility; but at this time, large farms removed miles from the river, have, by the liberal use of lime and good management, been made to rival even these river low grounds, and perhaps quite equal them in the product of wheat and corn. Portions of them, I doubt not, with a different mode of planting, would yield twelve to fifteen, and possibly eighteen barrels of corn to the acre.

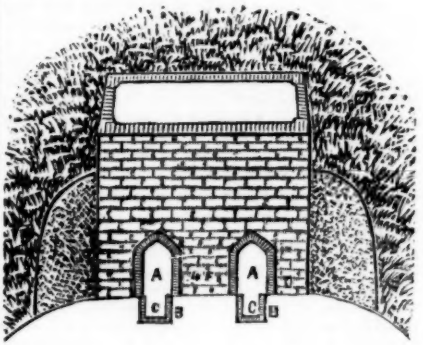
I visited two farms, each with from sixty to seventy acres in corn, which were estimated by the owners and neighbors to yield an average of nine to ten barrels; and in riding through one of them, in company with the proprietor, he pointed out ten acres, a portion of the field, where both the ground and corn had been measured: the yield was over one hundred barrels. These farms, more particularly claiming my attention, are situated directly on the Iron-stone Ridge, (which extends hundreds of miles through this and the adjoinining States) and are some six or seven miles apart. How much they have been improved, I can only judge from the report of others, and by comparison with other lands nearly adjoining, some of which, I feel confident, would not yield half, if even one-third as much, as the first-named amount.

These enterprising men burn their own lime; the stone is delivered on the Chesapeake and Ohio canal, at $1 to $1 12½ per perch, according to quality, and hauled two to four miles. They intend using, the present season, about 2,500 bushels each. One of them informed me that he had used ten to twelve thousand bushels of lime, on about 160 acres of land, and with a large increase of the crops. Another farmer had recently purchased 1,200 bushels of lime, paying sixteen cents on the canal, and hauls it six to seven miles, and over roads that might deter a man of less perseverance and energy. It is only some ten or twelve years since, that lime was first used in this section for agricultural purposes. Dr. W. B. was the pioneer in the good cause, and the first to erect a lime kiln in his district. Many have adopted the motto, "TO IMPROVE THE SOIL AND THE MIND." It is the true plan, and cannot fail of success: enlighten the minds of the farmers, and almost as a necessary consequence, the soil will be improved. The Agricultural Society has, at Poolesville, as I was informed, "a good agricultural library; and quite a respectable chemical apparatus, sufficient for analysing soils, manures," &c., &c. And, as may readily be inferred, other things are improving. The buildings "of the olden time" are giving place to fine and commodious brick, stone, or frame dwellings, neatly painted; barns of the same materials, two stories high, and from sixty-five to seventy feet in length; stone fencing for miles in one continuous connection, and, to appearance, almost "as durable as time itself."

In this region may also be seen the quarries from which the "Calico rock," forming the beautiful columns that adorn the Senate Chamber and House of Representatives, was procured. It makes excellent lime, though rather difficult to quarry, and break fine enough, to burn to the best advantage. Lower down the Potomac, are the splendid quarries of free-stone, red and white, of which much of the Capitol has been, and the Smithsonian Institution is now being, constructed.

There is much here to interest the geologist and analytical chemist, and perhaps also the admirer of the works of art as well as of nature. The aqueduct across the mouth of the Monocasy river, for the passage of the water in the Chesapeake and Ohio canal, is a great triumph of genius and skill. It is worth the ride to examine it alone. Most, if not all the stone used in its construction, was procured from the Catoctin mountain, and transported on a railroad made for the purpose.

I had also an opportunity of examining the square lime-kilns; considered a decided improvement by those who have used both kinds. Annexed is a copy of the drawing I made of one, giving a bird's-eye and front view, with dimensions, and by which I intend to construct another, in place of the one now in use. (See cut below.)



A A Eyes 2 feet wide, 3 feet 9 inches high, (one-third of which taken up by arches) and 5 feet deep. Offset, 6 inches on each side of ash-holes, on which to rest the four hearth-stones. On these the wood rests, which is kept so as to fill the eyes, and never pushed back into the arches.

B B Ash pits, 12 inches wide and 18 inches deep; walled up at sides, and extending about 2 feet each way beyond the eyes.

C C Benches on which to rest hearth-stones.

Arches set 2 to 3 inches from edge of eyes, and raised 15 to 18 inches above in front, and 8 to 10 inches still higher behind, and to extend within 2 feet of back wall.

Breast wall, 5 feet thick at base. From one foot above the eyes, it may be battered off to 3 feet at top. Kiln to be 12 feet square in the clear, and 12 feet deep, for 1,200 bushels. The diagram shews a little cross walling at the corners: one of the kilns was thus constructed; but the corners at right angles answer equally well, if logs of wood are set upright in them when filling. Logs laid in the bottom angles are also of advantage; when burnt out, the vacant spaces afford free scope to the fire in these angles. Round the top with small stone, not over 2½ to 3 feet high.

Space between the eyes 4 feet; eyes 2 feet each; outside of eyes 3½ feet, or 15 feet entire width of masonry.

The disadvantages attending the round kiln, as I know from experience, except when skilful and experienced hands are employed, is, the difficulty of properly setting the arch so as to make the draught uniform, or evenly distributed throughout; and even when apparently well done, we are often disappointed in "a good burn," finding much core in emptying the kiln. Few, except experienced masons, succeed well in their construction; and I have known them pulled down and rebuilt several times, though the mason was reputed as fully understanding his business.

In one instance, I saw both kinds side by side; the round kiln was no longer used. The owner—a man of practical knowledge and much experience on the subject—informed me that he would, on no account, return to the old-fashioned kiln, with the single eye and arch. His common farm hands now set the arches without difficulty, and uniformly succeed in burning well.

A thirteen to fourteen hundred bushel kiln was only twelve feet high—but little more than half the usual height of a round kiln of equal contents, and of course requiring much less digging and elevation of ground for the site. He had burned several kilns of lime, very successfully, in this form, without *any* stone work—not even for the breast and eyes; the latter were formed by perforating the intervening body of clay, forming the breast of the kiln, which the intense heat soon rendered as hard as brick, as it did also the inner surface of the kiln. The action of the winter's frosts, however, rendered walling necessary.

A kiln twelve feet square in the clear, and twelve feet high, will require from sixty-six to sixty-eight perch of stone to fill it; and will yield about twelve hundred bushels of lime, allowing eighteen bushels to the perch of stone. Lime-burning is a rough and exposing business at best; but in this kind of kiln, as the wood is kept *within* the eyes, and never thrown back under the arches, much of the suffering from the heat, and severe labor, is saved to the burner.

If advantage will result from the admission of steam (as recently recommended in the American Farmer) in the operation of freeing the stone from its carbonic acid—and I am strongly inclined to the opinion that the plan is a good one, under proper management—this kind of kiln is admirably calculated to generate it. Water, thrown occasionally on the coals in the ash pits, will afford an ample supply of steam, and in no degree interfere with the generation of heat. Limestone cannot, in the ordinary way of burning with *dry* fuel, be converted into lime without a given degree of heat—nearly or quite a *white* heat; nor is its long continuance necessary. I have generally observed that wood about *half* seasoned, makes the best "turn out" of lime; and had attributed it mainly to this cause. Dry wood, without careful firing, is apt to cinder the arch-stone—*i. e.*, make some kinds of limestone (which contains much aluminous or silicious earth) run into mass, and close the draught before the upper portion is sufficiently burned. Green wood will not always generate sufficient heat, and for obvious reasons. The addition of one or two tons of refuse anthracite coal, wet, and spread in three or four layers over the surface, and above the arches, will materially aid in the burning, and save in wood much more than the cost of the coal.

Bituminous coal does not answer well, used in this way; it is too adhesive, and prevents the free passage of flame and heat, through the stone.

A word as to laying off the ground and spreading the lime. My practice is, to checker the land twenty-one feet square, and apply the lime to the centre of each; half a bushel to the checker gives forty-nine bushels to the acre; though I usually apply three pecks, or seventy-three and a half bushels; and sometimes one bushel, or ninety-eight bushels to the acre. We occasionally slake it before spreading; but more commonly break the lumps, and spread it in the caustic state. When spread directly from the cart, much attention is necessary, or a portion of the land receives, perhaps, at the rate of one hundred and fifty or two hundred bushels, and that adjoining, not a fourth or fifth as much. With a given quantity to a given space, even the most careless laborer cannot materially change the proportions.

I could refer to individuals in that section, who use lime most liberally; and just in equal proportion (where judiciously applied, and the soil abounding in vegetable matter, to act in conjunction with the lime) appears to be the increase of crops, and the increased fertility of the soil, which may here be seen of almost every quality and color—red, yellow, chocolate, and white clays; others again are composed in great part of sand, gravel, shale, or stone, as various in kind as quantity. I found no difference in our estimate of the value of lime; nor does our experience differ as to the best mode of its application. They PLOUGH DEEP, LIME LIBERALLY, and (need I add?) GROW HEAVY CROPS.

Although my letter has extended much beyond the proposed limit, when I took up the pen, yet I must refer to another subject that possesses much interest to me, and to which I can only now give a passing notice—not a gold mine, my friend, for that appears to be the all-pervading and all-absorbing topic at present, though gold *coin* is not a great rarity there either—but I procured specimens of calcareous tufa, from the proper use of which, I should anticipate more solid and lasting benefit to the community where it abounds, or within reach by the canal, than will the wild regions of California prove to many who visit them, and who are making "haste to be rich."

The question forcibly presents itself, Where is the country that has been materially benefitted by such discoveries? And where is the country that has *not* risen in the scale of nations by an enlightened and industrious pursuit of agriculture? The honest toil of the husbandman not only rewards his own family and generation, but elevates his country amongst the nations of the earth. But riches thus suddenly acquired, however few there may be who can withstand the temptation, rarely confer much national or individual benefit; for almost as a necessary consequence, agriculture—one of the noblest, if not the most ennobling pursuit of man, certainly one of the most necessary—languishes, and industry is paralyzed. But we will leave these auriferous, and return to the calcareous deposites; for probably nothing that either of us could say would in the least degree tend to stay this torrent, which is sweeping like an avalanche over the entire length and breadth of our land.

The article referred to has not been brought into notice that I am aware of; neither has any use been made of it, so far as I could learn by inquiry. It is found near, and on the borders of, the Chesapeake and Ohio Canal, some twenty or twenty-five miles above the Point of Rocks, in the limestone region, as well on the higher as in the alluvial soil; at one point, the canal is cut directly through it. In the

specimens subjected to analysis, I have not observed, even with the aid of the microscope, any indication of shells or marine deposites; but rather conclude—though possibly erroneously, for my information is not very explicit as to its exact location—that the formation is principally induced by atmospheric influence on the limestone water, whilst in contact or in combination with silica, alumina, and perhaps other substances. I understood that it was abundant in quantity, and obtained with facility, by digging alone. It is quite porous, absorbing about 16 per cent. of water; and in this state (*i. e.* wet) is easily converted into lime of the best quality, at a low heat, little more than red heat. It is probable the article may vary in some particulars, procured from different localities; but this specimen ground as readily as plaster, and, by careful analysis, is found to contain—

Carbonate of lime	79	per cent.
Silica, with some oxide of iron . .	12	"
Alumina, with some little magnesia .	8	"
Loss	1	"
	100	"

Having been quite indisposed, and the weather very inclement, I could not prudently extend my ride into this section. But our proposed excursion there on the canal, will, I have no doubt, prove a source of much gratification to both of us. We must, however, defer it, to a more genial season; say, until the time for the singing of birds is come, and the fields and forests are clothed with the verdure of spring.

With much respect, thy friend,
EDW. STABLER.

From the Marlboro' Gazette.

CLOVER, PLASTER OF PARIS OR GROUND GYPSUM.

BY PATUXENT PLANTER.

Mr. Wilson:—The request you make, that I should answer the queries of your correspondent, "W. R. B." has induced me to employ this, my first leisure moment, in preparing such an answer as will, I hope, be satisfactory to W. R. B., and all my fellow farmers. Although I may not succeed in establishing any new theory, I will have the satisfaction of knowing that I bestowed labor and research upon a subject in which all feel a deep interest, and all are seeking information, and therefore that I have contributed my mite to the common weal.

About 1768 or 1770, Plaster was first introduced as a *fertilizer* in this country, and a few years after, it was used quite extensively in Maryland and Virginia. It elicited then a great deal of discussion as to its effects whether great or any at all? What crops it acted best upon, and the soil it best suited? And in what way it acted,—what was the modus operandi of its effects upon the soil or the crops. All this is to a certain extent still dubious, and remains still undisclosed among the arcana of Nature's wonders. But after all the discussions upon the subject, founded upon chemical analysis made by the greatest chemists of the world, and the theories of Philosophers, as also the *facts* which have from time to time been furnished by intelligent and practical farmers like Mr. W. R. B., the beneficial effects of this *substance* as an almost universal ameliorater or fertilizer is *admitted*, and the crops on which it acts best have been ascertained, and the best form of its application and many of its mysterious ways in improving both soil and products, have all been developed by the active observation of the farmer, aided by the penetrating eye of Science.

"W. R. B." states many facts that are familiar to us all, and among them, that the effects of Plaster are *now* rarely seen, and *clover* is seldom sown with success, when some twenty years ago the reverse was the fact. Then he asks, "why is all this? Is the land tired of cultivation? Is the *gypsum* adulterated, and its properties useless to the application of clover?" Surely the reason is not such as is indicated in either of these queries. Mother earth never *tires* of cultivation, unless you rob her of every thing. Look at the garden which is worked *every* year for a century, producing annually an average crop.—*Gypsum* cannot be adulterated, for gypsum is the stone from which man makes *Plaster*, and the same immutable laws of Nature's God, that caused plaster to fertilize clover twenty years ago, being unchanged, must render it still beneficial to the same extent. The *pure* article itself, still retains all its original properties, but may be rendered powerless by other causes, or from the absence of a co-operating cause. Before I proceed in my attempt to explain this, I would here say that *Plaster* may be adulterated, and that no doubt there are isolated cases where great frauds are practised, but a farmer can easily ascertain the general character of the article he buys by this process:

"Put a quantity in a dry pot over the fire and when heated it emits a sulphurous smell. If the ebullition (arising from whatever cause, be it the escape of air, or the dissipation of its water of chrystallization) is considerable, it is good. If it be small, it is indifferent. If it remain an inert mass, like sand, it is worthless."

Before we proceed to show how Plaster acts and why its effects are not as visible now as formerly, I had better dispose of that branch of my answer as relates to clover, for in that will appear a strong reason why the *effects* of Plaster are not now as palpable *always* as formerly, and it will show how the plaster often meets with counteracting causes that destroys its usefulness upon *clover*.

There are many reasons why clover does not succeed as formerly—not that the land is *tired* of it, but our climate has changed, and our system has not kept pace with it. The hot summers, preceded by long droughts of Spring, have all combined to prevent much clover sown at that season of the year, from vegetating, and has destroyed much that did vegetate. Those who have of late years sown in the Autumn, in the winter have succeeded in having a fine set of clover, but it is true, it did not grow so tall and luxuriant as it did in former times, or as it is sometimes in *some* places seen now to do. Why so? For two reasons. One is that the food on which clover feeds has been exhausted in the soil, and thus for want of sustenance it has dwindled. New and rich lands, especially light loams are filled with lime or phosphates, on which the clover feeds, together with what, by the aid of these and Plaster, it is enabled to gather from the atmosphere. A series of crops of clover being fed off or cut and carried off, would assuredly deprive the soil of all that amount of food so necessary for the clover, and it would have to live only on what the scanty supply of Plaster could attract from the atmosphere, unaided by these salts and phosphates which crop after crop had abstracted from the soil, without the former ever returning it in the shape of manure or concentrated fertilizers. Again, it is poisoned by its own excrement. By be-

ing constantly kept in the land unaided by chemical means of rendering it innocuous, the excrementitious matter will destroy the clover, therefore time must elapse between the crops of clover, sufficient for it to pass off, or become by decomposition innocent, or it must be neutralized by such chemical properties as will at the same time supply abundant food for the new clover crop. In this way alone can a succession of fine crops of clover be realised, as will more reasonably be explained, by the following extracts which I have selected as fully sustaining my views and which explain the reason that clover only *sometimes* now-a-days succeeds well;—that is, after a long *rest* or interval between crops, when the land itself replenishes its exhausted resources, or when the industry of man has supplied it with what is required for the production of an abundant crop of that useful but cormorant consumer of phosphates.

"Every 1000 lbs. of hay or straw are supposed to extract from the earth as much phosphoric acid as can be supplied by 8 lbs. of bones."—Ed. Amr. Far. Vol. IV. page 297. "The opinion deduced from *Berzelius'* analysis is, that 8 lbs. of bones contain as much phosphate of lime (bone earth) as 1000 lbs. of hay or straw abstract from the earth." Same art. same author.

Clover is of all grasses the greatest consumer of phosphate of lime.

"During an interval of rest the soil in a great measure, regains its original fertility."—*Leibig's* Agricultural Chemistry ch. VIII. "*Certain* plants, such as peas, *Clover* and flax, thrive on the same soil only after a lapse of years.

"*Decandolle* supposes that the roots of plants imbibe soluble matter of every kind from the soil, and thus necessarily absorb a number of substances which are not adapted to the purposes of nutrition, and must subsequently be expelled by the roots and returned to the soil as excrements. Now as excrements cannot be assimilated by the plant which ejected them, the more of these matters which the soil contains the more unfertile must it be for the plants of the same species. These excrementitious matters, may, however, still be capable of assimilation by another kind of plant, which would thus remove them from the soil and render it again fertile for the first. And if the plants last grown also expel substances from their roots, which can be appropriated as food by the former, they will improve the soil in two ways."—*Leibig*—ch. 8.

We all know corn grows well after clover, but corn not well after corn. In the last quotation we have the reason for the success of this rotation. We never see two heavy crops of red clover in immediate succession: first, because the greater the growth the more phosphate and potash is abstracted from the land; and 2ndly, for the reason so admirably explained in the following sentences which I take also from *Leibig's* Agricultural Chemistry. "The quickness with which this decay of the excrements of plants proceeds depends on the composition of the soil, and on its greater or less porosity. It will take place very quickly on a calcareous soil; for the power of organic excrements to attract oxygen and to putrify is increased by contact with the alkaline constituents, and by the general porous nature of such kinds of soil, which freely permit the access of air. But it requires a longer time in heavy soils consisting of loam or clay.

"The same plants can be cultivated with advantage on one soil after the second year, but in others not until the 5th or ninth, merely on account of the change and destruction of the excrements, which have an injurious influence on the plants being completed in the one, in the second year; in others not until the ninth.

"In some neighborhoods, clover will not thrive until the 6th year, in others not until the 12th; flax in the second or third year. All this depends upon the chemical nature of the soil, for it has been found by experience that in those districts where the intervals at which the same plants can be cultivated with advantage are very long, the time cannot be shortened even by the use of the most powerful manures. The destruction of the peculiar excrements of one crop *must have taken place before a new crop can be produced.*"

Now from all this we come to these conclusions. Unless there be an abundance of that peculiar food in the soil, on which plants of similar appetites feed, two kinds will not thrive in close proximity, while we often see plants dissimilar in their habits growing luxuriantly side by side—some plants luxuriate on the excrements or exudations of others. "On a soil for example which contains potash, both wheat and tobacco may be reared in succession, because the latter plant does not require phosphates, salts which are invariably present in wheat, but requires only alkalies and food containing nitrogen."—*Leibig.*

Unless therefore, the soil is full of phosphates or of manures containing the proper salts, clover will not succeed after a series of years with wheat or rye. The wheat crop may be good, and the clover bad, because the wheat getting the start—being stronger, exhausts all the aliment before the clover can contend with it for the mastery. Therefore, if "W. R. B." wants a fine yield of wheat and clover, he must use bone-dust, or guano, or agricultural salts freely, or a quantity of manure made of, or from such substances as contain the varied chemical properties essential to the production of both grass and grain. But if he will work his land two years in succession (provided it be *good* land) in corn or tobacco, so as to rid it of its poisonous excrements, then forego the benefit of a *poor* crop of grain, and sow clover by itself, *not* pasture it the first year, but fallow the next year, he will secure a heavy clover crop and a good *wheat* crop unless misfortune befall the latter. Then follow wheat with tobacco or corn, then clover, and so on, he will find that his land was not at fault, but his *old system.* This much upon the subject of the clover crop and the probable reasons for its failure of late years.

PLASTER.

PLASTER is, technically speaking, *sulphate* of lime, and is a compound of sulphuric acid and lime, and is used for like purposes as the muriate of lime.

To the extent of the quantity of lime it contains, it benefits all soils which lime would benefit, and in the same manner and by the same chemical process. It possesses the valuable property of fixing the *ammonia* contained in manure and spread upon the land—it fixes the ammonia in the soil which is formed by the slowly decomposing roots and other substances found in the soil. It has been ascertained beyond doubt to attract the ammonia and other gases floating in the atmosphere, and fix them about those plants which feed principally upon the air, by means of their leaves—hence broad leaved plants like tobacco, cabbage, corn, clover, &c., are more benefitted by Plaster than others, particularly *spear grasses.* It is particularly useful in dry seasons and on dry warm soils, because from its earliest use to this day, all admit that it attracts and absorbs much

moisture from the air. Judge Peters, in an elaborate treatise on this subject as far back as 1797, says:—"Whatever be the cause, *dew* will remain on a grass field plastered an hour or two in the morning, after all moisture has evaporated from the part of the same field not plastered. I have also seen often this effect in my garden beds, which if plastered, will retain moisture in the driest season when there is not the least appearance of it on those beds not plastered. If *water* be, according to the old, as well as modern opinion, "*almost all in all*" in the food of plants and vegetables, the plaster attracts or retains abundant supplies." Again: To many plants it forms a *direct* food, as by Sprengle's Analyses it seems that in every 100,000 parts of cabbage there are 1822 parts lime, 202 parts magnesia, 744 sulphuric acid, and 436 parts phosphoric acid. In like number of parts of clover there are 584 lime, 70 mag. 94 of sul. acid, 138 phos. acid.

Now, I hope, I have explained enough ways and means by which Plaster acts, and enough has been said to show that it is almost an universal assistant to the farmer in increasing his crops, at the same time fertilizing *permanently* his soil.—Why, then, does it not *always* act well? I say it *will always* act well under that peculiar state of soil which it was ordained by nature to act.—Lime, or no other fertilizer, answers the expectation of every one that uses it, under all circumstances and on every soil. Lime will not do well on wet lands. Much is yet, I confess, to be learned about Plaster, its uses, and its mode of action, but enough is known to render it an invaluable help to the practical and intelligent farmer. All practical men, and philosophers, and chemists, from Judge Peters, Gen. Washington, down to the present age of science, admit that one of its chief means of benefitting the soil and furnishing food for plants is by means of its sulphuric acid converting easily such decomposing agents as it finds in the soil, into ammonia; and rendering *it* less volatile than otherwise it would be, it is retained longer in the soil, and continues to be slowly evolved, so that the plants receive the greatest benefit, with but little loss from what, without the presence of the plaster, would readily escape. It follows, therefore, as a sequitur that there must be something in the land for the Plaster to act upon—some vegetable or animal manure, as food for its acid to act on—some "pabulum" as clover roots, &c., for its effects to be perfectly apparent to the casual observer. This doctrine is supported by Ingenhouse, page 12, in his "Essay on the Food of Plants,"—a very old work.

Judge Peters also says: "* * * * * plaster acts most powerfully, when in connexion with animal or vegetable, putrified or putrifying substances." He says in another part of his essay, that "plaster must come in contact with some animal or vegetable manures, or putrified substances, to give it its proper efficacy. And when so connected a small quantity of such manures or substances, will give it activity. The auxiliaries necessary to draw forth the powers of the plaster, are within the reach of every farmer of common industry and moderate capacity."

All vegetables and plants derive their nourishment from the air as well as the soil, while many live almost entirely from what they receive from the air and water; therefore, to all, and particularly to the latter class, is plaster beneficial. Chaptal and others assert that plants use nitrogen, oxygen and hydrogen gas, and carbonic acid as aliments. Now, plaster by means of its acid, "disengages *all the gases* from the substances containing them," which is comes in contact with, it is evident therefore that the roots or leaves, or vegetation, or animal matter, or manures of either sort, which it has to work on, and the more of these gases that they contain which it can extract, the more powerful will be its effect and the more apparent its value, shown as it will be in the increased product of the crop. So, if we want to see the full benefit of plaster, we must put it on such land as it suits, and such land as has a proper supply of matter or substances, out of which the plaster, by its chemical action, can manufacture a healthful and agreable food for the plants that you wish nurtured.

All soils plaster will not act upon. But the peculiar soil on which it will not act is rarely seen. As a general rule it acts better on light, calcareous soils than on very stiff soils. Gen. Washington says he tried it on some of his land at various times and in different proportions from 1 to 20 bushels per acre, and found no benefit whatever from its application, "*yet he was a believer in plaster, and thought on most soils it was of immense value.*"

Plaster, then, is most efficacious when applied to soils filled with the decaying vegetable roots or fibres, consequently it is of no use on barren soils. This action of Gypsum is only, after all, but an another powerful lesson that nature teaches man, which is, that unless he judiciously returns to the soil, in the form of manure, what he has carried off in the shape of grass and grain and *provender*, or a large portion of it at least, that he need not look to plaster, or lime, or guano, for the means of a succession of heavy crops, because they are but valuable aids to the farmer in elaborating from the necessary materials that he should place in the lands such food as the plants or grass may require.

Before I conclude, let me say once for all, that in my judgment *no where can plaster be more properly, or more judiciously* used than, from time to time, on the manure heap, over the cattle yards, and sheep folds, and in the stables. If it ever is of use, it is when thus used.

March 10, 1849.

Effects of Mud on Grass Lands.—Last season, Mr. David Choate, of Essex, Massachusetts, sent us, says the Boston Cultivator, some heads of grass, showing the effects of mud on the crop. At that time, no particulars were communicated; but since Mr. Choate has given the following: In the fall, meadow-mud was hauled from low land, and laid in a heap on high dry land, that yielded a very light crop. In a short time the heap was removed, leaving about an inch depth of mud, in consequence of which, a very stout crop of grass was produced the next season. The heads of herdsgrass* from the land thus manured by the mud are eight inches long, and of a large size. This shows the very powerful effects of mere mud, which abounds in nearly every section of the country. Almost every farmer has on his farm a mud mine, more valuable, in contributing to the happiness of himself and others, than a mine of gold.

* The herdsgrass of the East is called *timothy* with us.—Ed. A. Farmer.

An eminent breeder of Cattle in Virginia, writes us, that he considers Col. Capron's bull Valentine, a portrait of which appeared in our April No., as the finest bull he had ever seen.

From the Michigan Farmer.

MAKING SOAP.

Among other things, let me tell you to learn how to make soap. I do not know that I should have thought of naming this, if my ignorance of soap making had not troubled me exceedingly.—At first I did not know the method and depended on the old woman who lived with me, to make it. I went to her when the soap-keg was almost empty and told her we must have some made as quick as possible. "Why, law! Miss, now don't you see it ain't the right time of the moon?" I tried to persuade her that soap making and the moon were but very slightly connected, if the other part of the business was well conducted.—It was, however, to no purpose—I had to wait till the "right time" came round, before I could get my soap. After this, when I had the superintendence of a large family, I was obliged to buy it by the barrel, because I did not well understand the manufacture of the article, and I was really ashamed that such extra expense was caused by my ignorance. Sometimes there was too much lime with the ashes; then again not enough: sometimes it was too greasy, and sometimes any thing but what it ought to be. I tell you my experience in the matter, so that you may learn from your mothers *now*, and not have the trouble of *learning* when you ought to be making it. As I have given you so long a talk on the subject, I will add a receipt I found in the Cultivator. It may be of use to some of your mothers, if not to you. Mr. Tomlinson writing to Judge Buel, says: "My wife has no trouble about soap. The grease is put into a cask, and strong lye added. —During the year, as the fat increases, more lye is stirred in, and all occasionally stirred with a stick that is kept in it. By the time the cask is full the soap is made ready for use. It is made hard by boiling and adding a quart of fine salt to three gallons of soap. It is put into a tub to cool, and the froth scraped off. It is afterwards melted to a boiling heat, and a little rosin or turpentine given, which improves the quality."

Some of you will think me a most unsentimental sort of a woman, when I would advise you to learn how good bread, butter, coffee, pickles, puddings, &c., are made; but you will have to learn sometime, or do worse. Work with your own hands too, even if it should tarnish their whiteness a little. A man does not consider the beauty of a soft white hand a very strong recommendation, when he finds it has been kept for show and not for use. I think a young lady should be able to scour a kettle and grace a diamond.

Lucy.

Improvement.—We visited, during the past week, a portion of Baltimore County, and were particularly struck with the evident improvement that had been made on the farms through which we passed, within a few years. Lands that had become almost worthless, and turned over to the category of "old fields," have by a spirit of enterprise been reclaimed, and now give abundant promise of reward to their enterprising owners. We noticed several tracts that have thus been "renovated," in our journey from the nine mile stone, on the Frederick Road, to the old Race Course, and south-west from thence to Catonsville. An industrious and thrifty German population is filling up the country in the region of Catonsville. They are taking up lands in small parcels, and building comfortable cottages, which give to the neighborhood altogether a pleasing appearance. Its effect is evident on the village of Catonsville, by the establishment of stores and mechanics workshops; and prosperity thus based on industry cannot but be progressive.—*How'd Dist. Press.*

MEDLEY'S DISTRICT AGRICULTURAL SOCIETY.

To the Editor of the American Farmer.

Dear Sir:—The enclosed letter was presented and read at one of the recent meetings of the Medley's District Agricultural Club. Accompanying it was a considerable collection of geological and mineral matters obtained by the Dr. in our county, (Montgomery). You are hereby respectfully requested to give his letter space in the "Farmer."

Very respectfully, yours,

By order of the Society N. Brewer, *Cor. Sec.*

—

Conrad's Ferry, Dec. 18th, 1848.

Dear Doctor:—Permit me to present through you, to the honorable society over which you preside, a few specimens from geological formations in our district. I make this contribution in the hope that it may serve as a nucleus, around which your society will collect a cabinet of the geology and mineralogy of the district. We may not, I think, hope to attain any decided success in the improvement of our lands, until the nature and composition of our soils are better understood. Who can judge what is necessary to the economical melioration of a soil, without a knowledge of its deficiencies, or of the elements it contains? The application of lime with this view to a soil, already rich in calcareous earth, would show at once the folly and empiricism of such a practice; yet such to a certain extent is the one, or one nearly allied to it, now pursued by many farmers. The use of lime, ashes, and guano on some soils, in certain seasons fails to produce good crops. Is any one among us qualified to explain the cause of such failures? We have heard much said of late in favor of the employment of capital in the improvement of land. When Guano, the most potent manure, fails, as it does on some soils, to insure remunerating crops, it may well be doubted, whether the investment of money in State or bank stock, is not the safer and more profitable of the two. We need more capital than most of our farmers can afford to carry out the system of improvement recommended in late prize essays.

In my humble opinion, our want of knowledge to guide us to a more judicious application of capital to agriculture is the greatest of the two evils.

How shall we obviate this difficulty? acquire knowledge, to point out a better and safer way? Ought we not to search for the geological formations on which our soils rest; and from which they are for the most part derived; study them by experiments conducted by the lights of chemistry and geology until we find out their nature and adaptations. Then we might hope to discover a cheaper and more expeditious mode of renovating worn-out land than any hitherto adopted.

The time, I trust, is not remote, when a knowledge of the nature and susceptibilities of the soils we cultivate; the properties, relative value, and fitness of the different manures, will be deemed of more importance to the rising generation, than that of the location, boundaries and natural productions of Kamstchatka or Affghanistan: when the composition of our various soils will be known; and the treatment best calculated under the blessing of

Heaven to insure productiveness, be as well understood as the most simple principles in mechanics.

We should not, I think, doubt the attainment of these important objects, when we regard the triumphs of mind, which mark the age, and reflect that genius has already overcome much of the intricacy connected with the task.

The attention of the most scientific men in Europe has been for some time directed to this branch of inquiry; and their labors, although to a certain extent fruitless, have accomplished results of great value to the farmer, and invested the further pursuit of it with new and increasing interest. It is due, in a great measure, to these results, that we find the farmers in many parts of Europe, better acquainted with the principles of their calling, their soils more fertile, and crops more abundant than in our own country.

How long shall we, a people so signally favored, suffer by a comparison with those of other countries; in matters too, so intimately connected with our welfare. When we look at the success which has crowned the ingenuity and enterprise of our people, in almost every department of knowledge, we find this admission embarrassing, however just. Yet in this view of the triumphs of American enterprise, we find ample ground for the hope, that we are not to be kept behind in the race of improvement. Agriculture will soon be here, as it is there, elevated to the rank it deserves in the opinion of the people. We shall soon find that it is a science, as well as an art; and that it is susceptible of as much improvement from experiments as any of the sciences; and make up our minds to a patient and unflinching search for the truth in the great domain of nature, where alone in our efforts to advance this cause we may expect to find it.

That your society may long prove a light house, whose rays will bring to light many facts and principles in agriculture, now unknown, or imperfectly understood; and that your life may long be spared to lead the way, as you have, in this good work; and to guide the deliberations of the society, is the sincere wish of Yours, with respect,

Dr. Wm. Brewer. S. N. C. WHITE.

At the annual meeting of the Agricultural Society of Medley's District, in Montgomery county, on the 28th December, 1848, the President, Dr. Wm. Brewer, read a letter from Dr. S. N. C. White, presenting a number of specimens of the Geology of the District. After having read the letter, he proceeded to address the Society, as follows:

Gentlemen: In accordance with usage, it becomes my duty to present to you the condition of your affairs, on this occasion. I assure you, gentlemen, the prosperous state of your Society makes this a very agreeable duty. As one of the committee of examiners of Farms of the members, I was highly pleased at the general appearance. All bore marks of improvement: fields cleaner—better fencing, and ploughing more completely executed, and some greatly improved in fertility. All seemed to have paid much attention to collecting and compounding manure, and a goodly number were using lime and other foreign manures. I am constrained to believe your efforts and example have effected much good in your neighborhood. Kindness, urbanity, and good fellowship continue to prevail among you. From a very small beginning, you have progressed, and now your Library consists of more than fifty volumes, on Agriculture, Geology, and Chemistry, which have been selected with much care and judgment. Treasure up from this rich store of knowledge, not only yourselves, but encourage your children to read and study. Remember, "knowledge is power."

The number of members of this society have slowly but steadily increased, from fourteen to about forty. Why should any farmers withhold their assistance? Should they not rather unite themselves to some society, that they, likewise, might contribute something to the general stock of knowledge? We now lay before you a small, but complete apparatus for chemical experiments. We regret that our theoretical, as well as practical knowledge of chemistry, as adapted to geology, and consequently to agriculture, is not better than it is. We can, we ought to practice what we do know, and strive for more. I hope some scientific gentlemen, actuated by motives of philanthropy, may, ere long, publish a work on Geology and Chemistry adapted to Agriculture, and use terms suitable to your capacities; and that your youths may be taught these most useful branches of literature in your common schools.

In the early part of the year, we had a flattering prospect of combining the whole agricultural community of the State in an *annual* convention, composed of delegates from the several districts—from which convention we anticipated much benefit; but I am grieved to say this hope seems blighted for the present, by the diversion from the original intention. The present form may do some good, but never can combine the great agricultural community, nor supply their wants. It tends to exclude the great body of farmers from any influence in the society. We will not deny that the introduction of improved breeds of stock may be beneficial to some persons, and in some fertile locations, but to poor men and exhausted lands, it is doubtful, if it may not be prejudicial; while a convention of delegates chosen by the farmers annually, would represent the views and wishes of the people; and there can be no doubt they would devise measures which would profit their constituents in their sales, purchases and education of their children. I would admonish you farmers, who have hitherto stood aloof, to unite in society, and give your aid, both with your pen and counsel, to promote this object. What if you are in favor of improved breeds of stock, fairs, and cattle shows?—that is no reason why you should withhold your assistance in a matter so necessary to your best interests. By sustaining this scheme, you will give to the middle class and small farmers their due weight and influence, and restrain the moneyed aristocracy from overruling you. I conjure you, for the sake of your fair companions and dear pledges of your love, to come to the rescue of your profession from contumely and imposition.

"G." of Talbot, on husbanding the corn crop, is received, and will find a place in our pages in due time. We like to receive communications from such practical men as our correspondent, whose success and character as a "*good farmer*," are sure evidences that he is able to guide others.

We are indebted to the Hon. Mr. *Pearce*, our Senator in Congress, for a copy of the Report of the Register of the Treasurer, of the commerce and navigation of the U. S. for the last fiscal year—and the report on Sugar and Hydrometers, by Prof. McCulloh. Also to Hon. Mr. M'Lane, for a copy of the Patent Office Report for 1847. These documents are placed in the Library of the State Society.

WASHINGTON CO. (MD.) AGR. SOCIETY.

STAFFORD HALL, April 23, 1849.

To the Editor of the American Farmer.

DEAR SIR: I attended the last meeting of the Agricultural Society in this county, and was very much pleased with the address delivered by Dr. *John O. Wharton*, of your city. His arguments were very clear, and I was particularly pleased with that part in which he urged upon the farmers the vast importance of the establishment of an Agricultural College in the State and of the introduction of agricultural school books into all of our schools. He urged the farmers to be up and doing—to combine together and see that their interests be promoted by their Legislature and Congress. Indeed, I deem this as a matter of the greatest importanee, and I hope it will be agitated in all parts of the State. Persons delivering addresses before the different societies in the State cannot dwell too long upon this point. The farmers have suffered their interests and rights to be trampled upon long enough; and it is high time, in my opinion, that there should be some concert of action among them, to be alive to their interests and welfare. The advantages that would result from an Agricultural College, when properly under way, will be of incalculable benefit to all; there a young man may not only be prepared to farm with scientific knowledge, but will also be so well grounded in all branches of instruction as to be fitted to become a lawyer, physician, or, in fact, any thing that his inclination may lead him to adopt as his avocation in life. This much would result to the rising generation, and the farmers of the day would have the benefits of their numerous experiments upon the proper application of mineral manures, analysis of plants, &c. It is expensive to the farmers to make experiments; and, generally speaking, they are prejudiced against book farming, as it is termed, and will not submit to any innovations upon the system practiced by their forefathers. As you may well suppose, however, from the fact of your list for the "Farmer," in this district, being very large, (amounting to 55 subscribers, for that is the number on my list) this prejudice is fast dying away; and I think it might be so in all parts of the State, if the farmers generally would take your paper. It is a very practical work, and I think improving every year. It is cheap at $1, but more so with a club list of 30 names, which allows a reduction of 33⅓ per cent. I hope to have my list, for the next volume, increased to at least 75 or more. I have already about 20 new names, and I trust there will be very few to discontinue it. The Dr., in his address, urged upon the farmers the taking of agricultural papers, as the first step towards their improvement; and, after paying your paper a high compliment, he recommended it to all. I really hope your subscription list, for the next volume, may be greatly enlarged. I am trying to do a litte good to my fellow farmers, in getting them to take your work, and I hope others may go and do likewise. There is now being published, in the "Plough, Loom and Anvil," (which, in truth, is a capital work) what is to be an agricultural school book, and I hope to see it even taught in all of our schools. But I must now close, as I find I have already written you a great deal more than I intended when I commenced. Yours respectfully, W. D.

Dr. Wharton was called upon by a Committee of the Society, to express their thanks for his address, and to request him to furnish it for publication.

MR. WILDER'S COMPOST.

In one of the discussions at the State House, Boston, Massachusetts, held by the members of the Legislature and others, upon Agricultural subjects, the Hon. *Marshall P. Wilder*, in the course of his remarks, said:

"He had made some experiments with manures, some of which he would relate. He did not wish to be understood that he undervalued stable or barn yard manure, but such as was purchased from the stables of the city, by the cord, when deprived of straw or decomposed, was, in reality, only half or three-fourths of a cord. To obtain a real solid cord of manure, equal in quality, and at less price, had with him been a great desideratum, and he believed he had succeeded, by making a compost of meadow-muck, crushed bones, and leached ashes, in the following proportions:

One cord of meadow-muck, having been exposed to the action of air and frost at least one year	$1 50
12 bushels leached ashes	1 20
6 " crushed bones	1 50*
Labor	30
Total cost per cord	$4 50

The bones and ashes were mixed together, while the latter were in a damp state; and when fermentation had taken place, these were incorporated with the meadow-muck. In this condition the mass should remain until heat is generated again, when it will be fit for use.

He had found this compost equal to any stable manure for root crops, grass land, gardening purposes generally, and for fruit trees. For the last two years, he had mixed his stable manure with the compost, and also had added to it one-eighth part in bulk of fine refuse charcoal from the depots of venders."

*The price of bones in the above estimate is just 50 per cent. less than they can be obtained for in this market. At the price charged here, the cord of compost would cost $6 instead of $4.50, as above; but there is this to be said—the quantity of bones and ashes named by Mr. Wilder would answer for five times the quantity of muck.—*Ed. Am. Farmer.*

AGENTS.—We had intended publishing a list of Agents for our paper, but we find it impossible to spare the room, or to have it printed in time. All our subscribers are invited to act as Agents for us, and to remit as early possible, the names of new patrons to our journal.

THE NEW VOLUME.—Amongst other improvements in our next volume, will be the presentation of the "FARMER" in a beautiful new dress—the type for which is now being cast at the Foundry of F. Lucas, Jr., Esq. in this city.

CLOVER AND PLASTER.—The essay on the culture and use of Plaster, by "*A Patuxent Farmer*" is able, and evinces that nice discriminating judgment for which that eminent agricultural writer is so distinguished.

LIME KILNS.—*The Burning of Lime and Calcareous Turfa.*—The *paper* on these subjects from the pen of friend *Edward Stabler* is full of interest, and will doubtless find willing readers, as much on account of its intrinsic merit as from the well deserved celebrity which the writer enjoys.

THE AMERICAN FARMER.

BALTIMORE: JUNE 1, 1849.

TERMS OF THE AMERICAN FARMER.

$1 per annum, in advance; 6 copies for $5; 12 copies for $10; 30 copies for $20.

ADVERTISEMENTS inserted at $1 per square of 12 lines, for each insertion. In case of the continuance of an advertisement for six months or longer, a liberal deduction will be made. Address, SAMUEL SANDS, Publisher,
At the *State Agricultural Society Rooms*, No. 128 Baltimore st. over the "American Office," 5th door from North-st.

CLOSE OF THE 4th VOLUME OF THE FARMER.

This number closes the 4th volume of the present series of our journal, and it is with the utmost sincerity that we tender our heartfelt thanks to our friends for the deep interest which has been evinced by them in extending its circulation. Our list has been increased fifty per cent. during the year, and the indications for that which will commence with our next issue, induce us to anticipate that the ratio in the increase will be much greater for the next. We have, from time to time, taken the liberty of presenting extracts from letters received from gentlemen known to be competent judges, as to the value and character of our journal,—and we could, were it necessary, furnish hundreds of other such evidences; but we deem the solid support which we have enjoyed, in the increased addition to our list, as the surest testimonial that we could desire that our labors have been appreciated; that we have not toiled in vain, and that a discerning public estimate our exertions to maintain the interests, and exalt the character of the agriculturists of our land. That a good work is in progress, is evident in every direction in which the eye is turned—never in the annals of our State has there been so rapid a stride in the improvement of her resources; truly the desert is literally beginning to blossom as the rose, and the waste places are being turned into fertile fields. That we have been in some degree a helper in producing these results, we think we may without incurring the charge of vanity, venture to affirm, yet we do not deny, that self-interest has had some small share in producing our efforts. We know that as the interest, welfare and prosperity of agriculturists are promoted, so must our own prosperity increase. Seeing, therefore, that the field before us is an inviting one, we have divested ourself of all incumbrances, that we may, in time to come, devote our time and attention more exclusively to the work before us. We think we are now in a position to render ourself useful to those with whose interests we have been so long identified, and, with the favor of an overruling Providence resting upon us, in the continuation of health and life, we are determined to devote all our energies to the prosecution of the duties of the important trust confided to us.

TO SUBSCRIBERS IN ARREARS.—Those of our readers to whom we made an appeal in the April No., in regard to their arrearages, and who have not attended to the same, will understand the reason why their paper is discontinued after this number.

THE NEW VOLUME.

In the volume just closed, we flatter ourself that as great a body of valuable practical matter has been presented to the public, as is to be found in any similar number of pages ever published in this, or any other country, upon the subject of agriculture, and its kindred sciences. Notwithstanding which, we have reason to promise, with full confidence, that that which will commence with our next No. will certainly not be less valuable, and, if possible, we are determined to increase the interest of it. In addition to the value which will be given to our journal, by the publication of various reports and prize essays which will be elicited through the agency of the State Agricultural Society, which has adopted the "*Farmer*," as its *organ*, it will be seen by the offers which are made on an adjoining page, that we are induced by the great success and the evident good achieved by those we made last year for essays on important subjects, to renew them this, varying them so as to embrace other useful objects. In addition to this, we have the promise of valuable papers from some of the ablest writers and best farmers and planters in the country, and we have no hesitation in assuring our friends, that they may promise those whom they may solicit to become subscribers for the coming volume, a full remuneration for their subscription money. And may we not, therefore, appeal to the kind feelings of our patrons to increase our list? An addition of only one single *new* subscriber if procured by each of the *old* ones, would swell our issue to a ponderous size, increase our indebtedness to old friends, and bring us into communion with thousands of new ones. This operation is not only practicable, but would be a grateful evidence of the kind feelings towards us of those for whom we have labored so long and so pleasantly.

☞OF OUR EDITORIAL BRETHREN, from whom we have received many evidences of kindness, we would ask the favor of publishing or noticing the annexed short prospectus for the new volume:

THE AMERICAN FARMER.

The 5th volume of the new series will commence on the 1st of July, 1849. It is issued every month, each No. containing 32 large octavo pages, and is subject to newspaper postage only, viz: 1 cent on each number sent to any part of the State, or anywhere within 100 miles, or 1½ cent if out of the State, and over 100 miles. At no period of its existence has the "*Farmer*" enjoyed a more wide spread popularity than at present, and in addition to the valuable papers elicited by the State Agricultural Society of Maryland, the publisher has secured the aid of many of the most eminent agriculturists of the country, as contributors to its pages. During the past year, a handsome amount was expended in premiums for the best essays on important subjects, and $100 is now offered for other prize essays, which will be published in the forthcoming volume. The Maryland State Agricultural Society, at its meeting in May, proposed to raise a fund of $100, to be expended for three pieces of silver plate, one of the

value of $50, to be presented at the next Annual Fair of the Society, to be held in October next, to any person who shall obtain the largest list of *new* subscribers to the *Farmer*—the 2d, of the value of $30, for the next—and the 3d, of $20, for the third largest list, besides sundry other offers which have been added by the publisher, in agricultural works.

Terms of the American Farmer.—$1 per annum, in advance—6 copies for $5—13 do for $10—30 do. for $20. Address SAML. SANDS, Publisher, Maryland State Agr. Society's Hall, 128 Baltimore-street, Baltimore, Md.

"THE FARMER FUND."

By the proceedings of the *Maryland State Agricultural Society*, held at their hall, on the 2d and 3d of May, it will be seen that a proposition was made and adopted, of some considerable importance to this journal. From all directions of our own and neighboring States, the subscribers to our work have spoken of it in the highest terms, and as worthy of the most extended circulation—the *State Society* have, on various occasions, endorsed the same sentiment—and it was justly remarked, we humbly conceive, at the meeting alluded to, that the agricultural interests of our country would be benefitted by its increased circulation—that there were no doubt 100 persons to be found who felt themselves indebted to its pages at least $1 more than the subscription called for, who would readily contribute to a fund raised for such a purpose. The resolutions offered by the President, and adopted by the Society, proposes to raise $100 (no one to contribute more than $1) to be expended in the procurement of THREE PIECES OF SILVER PLATE—

The *first* to be presented to the person obtaining the largest list of *new* subscribers to the *American Farmer*, for the volume commencing in July next, and to be of the value of $50

The *second*, for the 2d largest list, $30

And the *third*, for the 3d largest, $20

IN ADDITION TO WHICH,

The Publisher adds the following inducements:

For the 4th largest list, Washington's Agricultural Correspondence, Johnson's Agricultural Encyclopedia, Youatt's Treatise on Cattle, and the Farmers' Dictionary, $12

For the 5th largest, the 4 vols. of the American Farmer, bound, and the 5th, as published, $6

For the 6th do. Buists' Gardener, Cole's Fruit Book, and Veternarian, Randall on Sheep Husbandry, Floy's Guide to the Orchard, and vol. 5 of the Farmer, $5

For the 7th, the Farmers' Encyclopedia, and Cole's Fruit Book, $4

For the 8th, Youatt on the Horse, Falkner's Farmer's Manual, and Pedder's Land Measurer, $3

The names of subscribers, and the cash therefor, to be forwarded as received up to the 1st of October, when the successful competitors will be announced, and the names of the contributors to the fund will be published in the Farmer for that month—and the prizes presented at the Cattle Show.

It is to be hoped that these liberal offers, in addition to the consciousness of doing a public good, at the same time, will induce many of our friends to try and bear off the palm.

MORE PRIZES!!

The able papers which were produced for competition by our offer during the last year of valuable pieces of Plate, for Essays suitable to our pages—the extraordinary circulation which were given to them by the press in all quarters of the country,—the deep interest with which they were received by the Farmers every where—and likewise the great increase to the subscription list of our journal caused thereby, has induced the publisher to present the following offers to the consideration of writers on agricultural subjects:

No. 1, For the most approved essay on the best plan of Farm Yard buildings, and the management of the Farm Yard, having in view, economy in time and feed, and the entire arrangement and convenience of the same,—with drawings, on a scale suitable to the pages of our journal,—a piece of Silver Plate, of the value of $50

No. 2, For the most approved essay on the culture of Tobacco, the soils and localities best suited to the plant beds, the mode of preparing and manuring the beds, the *time* and *mode* of sowing the seeds, the manner of protecting the young plants as well from frosts as from insects, the period and method of setting them out, the soil and situation best suited to the growth of tobacco, the manures best adapted to promote its growth, the best method of cultivating it, the distance at which the plants should be set apart, the time of priming, topping and suckering, the most approved implements used in such processes, as well as the manner of performing each, the best method of worming, the *time* for, and *mode* of cutting, the best method of *housing*, *curing*, *stripping*, *pressing*, the best sized hogsheads and the most suitable material or wood from which to make them, as also whether it would not, under the present circumstances of the tobacco trade, be to the interest of the planters to decrease the quantity grown, and introduce the culture of other agricultural products, and if so, what kind, $30

No. 3, For the most approved essay on the management of the DAIRY, whether the making of butter or cheese is most profitable, what breed of cows is best adapted to the purposes of each, the kind of house most suitable for each, the best processes used in the making both butter and cheese, the best utensils used in either manufacture, the best kind of grasses to form the pastures whereon to keep the cows, in spring, summer and autumn, the food best adapted for winter, the mode of preparing, packing and keeping butter, as also whether the dairy business could not be advantageously increased, and to what extent—whether *cellars* or *spring* houses are best calculated for making first quality butter, how either should be constructed and furnished, what degree of temperature it is desirable to preserve in either, to ensure facility in churning, and how many times in a day the cows should be milked, and at what hours, $20

All essays, presented for competition, whether successful or otherwise, to be at the disposal of the Editor, the author having the privilege of withholding his name, if desired.

The Essays to be handed in by the 1st of September next, and examined by Judges to be appointed for the purpose, and the publication commenced in the Oct. No. of the American Farmer.

SAMUEL SANDS,
Publisher of the American Farmer, Baltimore, Md.

TO CORRESPONDENTS.—"Rusticus," on the inspection of Plaster, is received—also "Collington," on the subject of Chappell's Fertilizer; and we regret that the crowded state of our pages, of papers before promised, preclude their insertion in this No. Our columns are open to the temperate and respectful discussion of all subjects having a bearing upon the interests of the farmer.

"E. F. R." has a raciness about him with which we are much pleased—but we cannot make room for him this month.

"A Subscriber's" enquiries in regard to the culture of the Artichoke, will be attended to hereafter.

"Hoctberg" will require more time and space to answer than we have at present at command; we hope to be able to attend to him in our next.

"E. F. H." of Harford, will meet with attention in due time—he will find that we have chosen the subject upon which he asks information, for a prize essay.

"Thos. Johnson," on the English system of laying down pasture lands, is also received, and we hope to be able to publish it next month.

"R. M. Wort," on the culture of the Strawberry plant, should have appeared this month, but like a vast number of other useful matters laid off for insertion, is crowded out.

"Americani" gives us his *modus operandi* to try the efficacy of Chappell's Fertilizer in comparison with ashes, &c. on barley—and promises, when the result is known, to let us hear from him. His communication, though having the great merit of brevity, has to go over to our next issue.

We have received from Col. Capron, a diagram of the drains made on his farm, which, if he can furnish us with the statement to accompany it in time, will be published in our next.

We have for sometime past intended to notice the proceedings of the Wythe County (Va.) Agricultural Society, and other matters of interest to our readers in that vicinity, but circumstances have prevented it—in good time, we shall attend to them.

We flatter ourself that we will receive the promised paper, from the Hon. W. Newton, on the Farming operations of Mr. Ruffin, in season for our next number. We know of nothing that will be more acceptable to our readers, and we would esteem it a great favor in being permitted to begin our new volume with so valuable a body of information, as we are sure will be found in the details promised. It would be a capital introductory or forerunner to the numerous able essays which we intend to present during the coming year.

"Subscriber," of Salem, Va. will probably find the required information on lime-burning, in the paper of friend Stabler in this No. of the Farmer.

A communication from the members of the "Farmers' Club of Sandy Spring," has been received, and will appear next month.

PRINCE GEORGE'S COUNTY AGRICULTURE.—We learn from the *American* that letters from Prince George's County, "say that the planters there have determined to devote more attention than formerly to the raising of wheat. That they will plant smaller quantities of tobacco than formerly, with the view of sending to market nothing but a superior article."

This determination we think a wise one, as in the present depreciated state of the tobacco market nothing but the superior varieties of Tobacco will pay for the labor of culture and afford anything like a remunerating consideration to the grower.

FINE SPECIMENS OF WOOL.—Mr. Wm. Jessup, of Baltimore county, has left at the Society's Hall, two specimens of Wool; which for fineness of texture and length of staple have been very much admired. Mr. Jessup is gathering quite a flock, and we do hope that the public spirit which he evinces in the introduction of superior animals, and the excellence of his system of farming generally, will find many imitators in his county.

One of the samples of wool is from a full bred New Oxfordshire Buck, which at 2 years old, weighs 22½ lbs. (live weight)—his fleece weighed over 12 lbs. The other, is from a Buck, 1 year old, live weight 134½ lbs. and weight of fleece over 11 lbs.—he is out of a full bred Leicester ewe, by a full blood New Oxfordshire buck, got by one of Reybold's imported bucks. The fleece from the latter is finer and longer than from the older buck.

BEAUTIFUL WHEAT.—Messrs. Emory & Stevens, Commission Merchants of this city, have deposited in the Agricultural Hall, a sample of Blue Stem White Wheat, which we think is seldom surpassed in our market. It was raised by Mr. Jos. Lowry, of the Bay-side District of Talbot County, who gives evidence in the manner in which this wheat has been preserved and sent to market, of his being a very neat farmer. The farm is owned by Mr. Jos. Camper, and is on a long lease to the present occupant—and by the judicious application of shell lime, and good management, has been increased in value and fertility to a surprising extent. The land was purchased for $7½ per acre; now, $50 would not probably be taken for it—showing the effects of long leases to good tenants. Messrs. Gambrill & Carroll purchased the lot from which the sample left with us, was taken, for the manufacture of family flour.

We have received at the State Society's Hall, from Mr. Jno. Feast, a few seeds of the Mammoth Pumpkin exhibited at our Shows last Fall, which weighed 166 lbs. We have distributed them to visiters.

From the same gentleman, a small package of the Trifolium Incarnata, Scarlet Clover Seed, much admired by all who have examined it—and a very fine stalk of the Victoria Rhubarb, or Pie Plant.

From Mr. Wm. B. Dobbin, of Elk Ridge, eggs of the Jersey Blue chickens, 5 of which weigh a pound.

From Messrs. Whitman and Sinclair, samples of the Rock Salt, so much valued for stock.

From Mr. Chappell, a cannister of his "*Agricultural Salts*," and from Mr. Whitman, a specimen of the "*Improved Guano*," advertised by him.

Samples of fine white Mercer Potatoes, from Mr. Jones, of Back River Neck, Baltimore county.

Specimens of Bone Dust and Poudrette from Thomas Baynes' Factory, and of Bone Dust from Hayden & Coale; and from Collins and Bullock's establishment.

From Dr. Gideon B. Smith, various Agricultural and Pomological books and pamphlets.

From Mr. Hy. Price, of Kent co., specimens of marl from his farm, and from Marcus Duval, various specimens of soil of very peculiar texture.

From Mr. Skinner, for exhibition, the atmospheric churn.

CHAPPELL'S FERTILIZER.—On another page will be found a communication from Dr. Chappell, in regard to the analysis by the State Chemist, of the Agricultural Salts manufactured by him. The action of Dr. Higgins in the premises, was strictly in accordance with the duties of his office, but inasmuch as the manufacturer of the "Salts" has deemed himself injured thereby, we have not considered it in accordance with justice to withhold his reply—although we should have preferred, and did advise, his delaying it until the committee appointed by the State Society, to whom he had referred the subject, had reported thereon. The interest of the farmers, however, cannot fail to be benefitted by these discussions.

CORRECTION.—In Messrs. Kettlewell & Davison's advertisement, as published last month, several egregious typographical errors occurred. It is now published in a corrected form.

DR. BREWER'S ADDRESS to the Medley's District Society, is published on another page. We regret that the Dr., who had urged the assemblage of the convention last year, could not be present thereat to advise with his brother farmers as to the best mode of obtaining the objects desired by him and them. Those who did attend on the occasion, upon consultation, proposed the formation of a State Society, as the best means of accomplishing the greatest good to their class; and the operation thereof, thus far, has given almost universal satisfaction —and we do hope that the Dr., after a year's trial of the State Society, will be enabled to see all his warmest anticipations of good by yearly conventions, fully realized by the action of the Society, and that he will cordially unite in extending its influence.

We are indebted to Mr. Eubanks, Commissioner of Patents, for a copy of a valuable document, a "Report on the Breadstuffs of the U. S." by Dr. L. C. Beck.

"JACOB BEHEL," of Pa. calls our attention, as Secretary of Md. State Agricultural Society, to the advertisement of John Bamborough, in the last Farmer, claiming to have received the premium for the best Fanning Mill at the Exhibition in this city last Fall. Mr. Behel refers to the report of the committee on Implements in the Farmer of Dec., page 162, to prove that *he* received the first premium, (and it will be seen that Mr. Atlee's was the second best). We deem it proper that the exposition should be made—we know not on what grounds Mr. Bamborough could have made the statement which is contained in his advertisement.

THE WHEAT CROP.—The accounts, which we receive from all directions this side of the Potomac, represent the prospects of the wheat crop as unusually good for the season of the year, though it is even now too soon to form any just estimate of what the crop may be. We regret we cannot speak as favorably of the crop in some parts of the South. In North Carolina the crop is much injured in some sections; we heard of a case in which one farmer lost 400 acres of wheat by the frost of last month. A correspondent in Eastern Virginia writes us, that "the early varieties of wheat were greatly injured at the same time, killing the plant entirely in many instances, and the only hope from such rests upon new branches from the root, which may make half a crop, with forcing weather."

P. S. Since writing the above, we have heard of numerous instances of the appearance of the fly; yet we hope the extent of its ravages will be limited. The wheat has suffered also from the drought; but we trust the rains of the past week have been in time to prevent serious injury from this cause.

There is a very general complaint relative to the Corn crop. The cold weather has put it back very much; and, in many instances, the seed has rotted in the ground. The oats and grass crops have also suffered.

PRAISEWORTHY.—A subscriber, who, like some others, had neglected to pay up his dues for two or three years, thus makes amends for his neglect, which are presented for the imitation of others in a like position.

"*Mr. Editor* :—I have been a delinquent to you for some three years past, in not paying up for my paper; and I will not attempt to relate any excuse, but plead guilty to the wrong I have done you in *neglecting* to do so, for I assure you I would not be without your journal for five times its cost. Enclosed you will receive three dollars, which I think is the amount due you, to the end of the present volume. You will preceive that I am trying to make amends for my past neglect, as I have persuaded three of my neighbours to take your work, and should have been pleased to have pervailed upon more, as I think that every farmer should receive it; also enclosed you receive four dollars more, to pay my next paper in advance, and wish you to send on the back numbers of the present volume of the American Farmer to the following names."

A subcriber in a thriving section of our State recently subscribed for a copy to be sent to a friend in Adams county, Pennsylvania, and remarks: "I passed through that section of country twelve or eighteen months since, and was recommending the "*Farmer*" to my friends there—they seemed to have a good conceit of their own mode of farming, and did not appear to think much of "book farming," as they call it—and I would wish to convince them, that however good their system may be, it can be improved by comparing with the experience of others—and I think if the Farmer was introduced amongst them, that it would induce others to become subscribers to your invaluable publication."

Maryland State Agricultural Society.

BALTIMORE, May 2d, 1849.

In obedience to the requirements of the constitution, the Board of Managers, together with a number of the members of the society, met in their hall, in this city. CHARLES B. CALVERT, esq., President, having taken the chair, presented the report of the committee appointed to prepare a suitable Hall for the accommodation of the Society, and the formation of a Library—the Committee state that they had agreed with the editors of the "American," for the Rooms in which we are now assembled, and the warming thereof, at the annual rent of $287—that the same had been prepared with suitable furniture, under the direction of the Secretary of the Society, and was now daily open for the reception of members, and others disposed to visit them. The report was concurred in, and the contract with Messrs. Dobbin, Murphy & Bose, ordered to be signed by the committee on behalf of the Society.

The President also presented the following communication from Dr. P. S. Chappell, which was read:

C. B. CALVERT, Esq., President of the State Agricultural Society.

An article having appeared from the State Agricultural Chemist, in the *May* number of the American Farmer, which I consider as doing injustice to the Fertilizer, known under my name, (and in which to some extent my reputation is at stake,) I am induced, through you, to call the attention of the Board of Managers of the Society, over which you preside, to the subject, and *request*, (should it meet with your approbation,) the appointment of two or three members of your Board, to investigate the matter; and I think I shall be able to convince them of the *incorrectness* of the analysis as published in said article, and coming, as it does, from an officer of the State, is calculated to have more weight in forming the opinion, as to the fertilizing powers of the agricultural salts, than otherwise would be the case, had the analysis been made by any other, of less authority.

Every facility will be given on my part, should the managers deem this communication worthy of their attention. Very respectfully,

Your ob't serv't,

Balto. May 2, 1849. P. S. CHAPPELL.

Mr. *J. T. Earle*, of Queen Ann's, moved that the request of Mr. Chappell, be acceded to, and that a

committee of three be appointed to take the subject into consideration, and employ scientific aid, if they deem it necessary, and that any expense incurred thereby be borne by the society.

Mr. *A. B. Davis*, of Montgomery, doubted the propriety of any action of the society in the premises, as an undue importance was given to this manure over others—and that Mr. Chappell should employ a chemist at his own expense, if he thought proper.

Mr. *Earle*, in reply, contended, that it was not the interests of Mr. Chappell which it was deemed necessary to protect by the action of the Society, but those of the farmers of the State, many of whom had purchased largely of these "salts" of Mr. Chappell—if *they* had been imposed upon by the manufacturer, it was proper that the public should be satisfied thereof. The State Chemist had presented an analysis to the public, which was pronounced "*incorrect*," and there was perhaps no more suitable means to satisfy the public mind than by the action of this Society—that no doubt Mr. Chappell would willingly pay for the services of the Chemist, but it was not, in his estimation, proper that he should either furnish the chemist or the samples to be examined.

After some further discussion, the motion was adopted, and the President authorized to appoint the committee, and Messrs. Capron, of Prince Geo's, Earle, of Queen Ann's, and Dr. Wharton, of Washington county, were accordingly appointed.

The President presented to the Society, a copy of Randall's Sheep Husbandry, and Elements of Agriculture, as a donation to the Library of the Society, from J. S. Skinner, Esq.

Mr. Earle offered the following resolutions, which were read:

Resolved, That the establishment of an agricultural School in the State of Maryland, would, by the enlightenment of those engaged in the science of cultivating the earth, greatly tend to bring them to that position of importance they should occupy in the State, and by its indirect influence in increasing the product of her domain, largely add to her available wealth.

Resolved, In furtherance of this object, that a committee of five be appointed by the chair, to prepare a memorial to the next Congress of the United States, asking a donation of acres of the Public lands, to aid in procuring scientific education to this great, but long neglected, interest.

Resolved, That the Corresponding Secretary of this Society be authorized and requested to prepare a circular, and address the same to the different State Agricultural Societies of the Union, apprizing them of our proceedings under the 2d Resolution, and seeking their influence, by co-operation and concert of action, in asking for their respective States a portion of the Public Lands for the establishment of agricultural schools within their limits.

In presenting his resolutions, Mr. Earle urged the importance of the subject embraced in the first resolution—that the farmers had a right from their numerical strength, and the importance of their profession upon the interests of the country, to demand that provision should be made by the government for the development of the resources of the soil; that whilst the public lands were so freely granted for other purposes, and the public treasure lavished upon other objects, Agriculture, embracing as it did, so large a majority of the population and wealth of the nation, had been almost totally neglected—and there could be no object to which the public lands can be applied more beneficently and justly, than to the introduction of science among the farmers and planters of our country, thereby producing that great desideratum, the making of "two blades of grass grow where but one grew before."

The resolutions were adopted, and the blank, on motion of Mr. *M. Goldsborough*, of Talbot, filled with 100,000. The President appointed Messrs. Earle, N. B. Worthington, of Anne Arundel, M. Goldsborough, Jas. Carroll, Jr., of Baltimore, and W. W. W. Bowie, of P. George's, the committee.

Mr. *Earle*, offered the following resolution, which being seconded by Mr. Worthington, was read the first time:

Resolved, That at our next annual exhibition the duties of the committee on implements be distributed among several committees, with the view of lightening the labor, and in order that full justice may be done to the various articles presented in that department for premium.

Mr. E. in offering this resolution, stated the impossibility of the committee, as constituted at the last Exhibition, performing the duty assigned to them in a manner satisfactory to themselves, to the interests of the Society, or with justice to the exhibitors. The time allotted for examination was entirely too limited to give that thorough examination and trial of the immense number of implements and machinery which was on the ground, and to report minutely upon them. That at the next Fair the number would, no doubt, be largely increased, and it was necessary to make such a division of the labors to be performed, as that they might be well done, and justice meted out to all. He proposed that four committees instead of one be appointed, and that they be classed as follows: 1st, on Plows, Cultivators and Harrows—2d, on Horse-Powers, Thrashers, Wheat Cutters—3d, Drills, &c.—4th, Miscellaneous articles not enumerated under the preceding heads.

The President remarked that he had prepared a circular during the recess of the Society, intended to obviate the difficulty pointed out, which had been forwarded by the Secretary to the several Vice Presidents, which he read as follows:

Maryland State Agricultural Society's Rooms,
Baltimore, March 21st, 1849.

SIR:—It is believed that the Agricultural community will be greatly benefitted by adopting some method to prevent the many impositions which are daily practiced upon them by the sale of implements and other articles, which are found, upon trial, to be entirely worthless; and in order, in some measure, to attain this object, it is proposed to appoint, in each county of the State, a Committee composed of the Vice President of the State Agricultural Society and four other gentlemen, who shall direct and superintend experimental trials of all such implements as may be submitted to them for examination, and make a report of the result of such examinations to the State Society. In order to obtain the services of the most competent men to make the experiments, you are particularly solicited to confer with the Agricultural Society of your county, if there is a County Society in existence—and if not, with some of the most intelligent and practical agriculturists—and forward to Samuel Sands, Esq., Secretary M. S. A. Society, the names of four such gentlemen as will, with yourself as chairman, undertake the duties of the office. It is very desirable also to obtain such statistical information, relative to the destruction of

sheep by dogs, as will have weight in carrying out the suggestions of the able report made by the Committee on Sheep, at the late annual meeting of the Society; and you are, therefore, earnestly requested to procure the names of all persons who have lost sheep by dogs in your County, with the number lost by each, and forward the same to Samuel Sands, Esq., Secretary. Yours respectfully,

CHARLES B. CALVERT,

President Maryland State Agricultural Society.

Mr. Earle made some explanations in regard to the operation of the resolution—acknowledged the receipt of the circular, and intended handing in the names of the committee for his county to the Secretary.

Mr. Davis also acknowledged the receipt of the circular, and intended to lay the same before the County Society at its next meeting—he also contemplated laying before the State Society some information upon the latter clause of the circular, relative to the destruction of sheep by dogs.

After some explanations from the President and Mr. M. Goldsborough, the resolution for the division of the labors of the commttee on implements, was adopted.

Mr. Hall, of Montgomery, suggested that the reports of the committees of the County Societies should be made to the State Society's committee on Plows, in order that the latter might be assisted in their judgment and awards.

Mr. Milburn was in favor of dividing the duties of the Committee on Implements, but thought that the proposition in the circular it would be impossible to carry out.

Mr. Whitman remarked that the tax upon the manufacturers would be too onerous, to furnish their implements and machinery to the various counties of the State.

Mr. Maynard coincided with Mr. Whitman's views, and showed that articles made for and used in one section of the State to advantage, were entirely useless in other counties.

The President thought that the trial could be effected by using the implements sold by the venders, without imposing the tax complained of.

After some further discussion the subject was passed over.

Mr. Skinner in submitting the following resolution, remarked, that we had not been enabled to enlist the public press in behalf of the agricultural interests. How much better this matter, said Mr. S., is understood in the Eastern States. In the great city of New York, for example, even at the smallest meeting of the Farmer's Club, you will always find competent reporters in attendance from various newspaper establishments, to take minutes of all that occurs. So in Albany and in Boston, after each meeting of the Agricultural Societies, or Clubs, you will find in their leading public journals, column after column of what is said by the most distinguished men in attendance from all parts of the State to assert the rights and to denote the wants and the progress of Agriculture. There every new experiment, and discovery, every item of information, and every suggestion for the benefit of the Farmer is fully reported and disseminated far and wide for common benefit.

Mr. S. said that whilst every trifling accident—every petty larceny, or wonder was duly recorded, and the amplest details furnished in our city papers, the absence of reports of your proceedings, except such as by some chance may be offered, and which are promptly and politely inserted, shows a grievous lethargy and absence of concern about the condition and the wants of the cultivator.

Perhaps, said Mr. S., the proprietors of these journals may not be aware of the extent of your accommodations, of the importance of the subjects to be discussed, and of the degree of intelligence which may be here expected to be concentrated upon them—and hence, said he, I offer you the following resolution:

Resolved, That all proprietors of public journals, who take an interest in the welfare of Maryland Agriculture, and who desire to be instrumental in its improvement, are hereby informed that the requisite accommodations will always be afforded to their Reporters, for noting the proceedings and debates of this Society; and that they are hereby respectfully invited to make their journals the mediums of information to the people of Maryland, as to the questions discussed, and the measures proposed or in progress, as far as this Society is concerned, to advance the interests of the cultivators of the soil, and to protect them from the neglect and abuses, to which, as we believe, for want of concert, they have been hitherto subjected.

Mr. Skinner then offered the following resolution, after remarking that in Ohio, the estimate was, that the loss in value of sheep by *dogs*, was 80,000 *a year;* that in this State, one gentleman present said it was believed that in his county, 2000 *had been destroyed by dogs this year!*—but to estimate, he said, the loss in this way, it was necessary to take into the account, not only the actual number destroyed, but the incurable injury and deterioration an attack by dogs always inflicted on the surviving portion of the flock; and the yet greater loss to the State, by preventing that extension of sheep husbandry, for which almost every farm possessed adequate resources. If such a crying grievance afflicted any other class of society, it would be immediately arrested by remedial legislation:

Resolved, That the Vice Presidents of this Society be and they are hereby requested to take such measures as they may deem most convenient and effectual, for estimating the probable numbers of *sheep destroyed by dogs*, annually, within their counties respectively, and also the number of dogs in each county; and that they return such estimates, to this Society, at its annual meeting in October—with a view to the enactment by the Maryland Legislature, of such laws as may be deemed most expedient and effectual against an evil of such serious magnitude.

This resolution was unanimously adopted.

The President called the attention of the Society to the importance of preparing a list of Premiums for the Exhibition the ensuing Fall. Mr. *Walsh*, of Harford, moved that the subject be referred to an adjourned meeting.

Mr. Goldsborough moved that a committee of five be appointed, of which the President should be chairman, to prepare a list of Premiums, and fix upon the time and place for holding the Fair, and to select an Orator for the occasion, and that they report to an adjourned meeting to be held to-morrow morning, at 11 o'clock; which motion was concurred in. The President appointed Messrs. Goldsborough, Worthington, Earle and Milburn.

Mr. Walsh offered the following resolution:

Resolved, That there be appointed in each of the counties of this State, a committee of three to receive the annual subscriptions of members, and also to solicit others not now members to become such.

Mr. Goldsborough offered as an amendent, that the first named of the committee be empowered to receive the money collected by his colleagues, and transmit the same to the Treasurer, which was concurred in, and the resolution, as amended, was then adopted.

The President announced to the Society, that Professor Johnson, of Durham, England, was expected in this country, and it had been suggested that a course of lectures from him might be delivered, if measures were taken to that end, if the Society desired to secure his services.

After some interchange of opinion, the subject was passed over for the present.

Mr. Walsh, from the Committee appointed at the last meeting of the Board of Managers to select a suitable place, for holding the annual Exhibition of Society, reported that no definite action had yet been taken on the subject, and asked for further time to make a report—which was granted.

Mr. Gill, Treasurer, presented a quarterly report of the Finances of the Society.

On motion, the Society then adjourned until to-morrow at 11 o'clock.

Thursday, May 3d.

The Society met agreeably to adjournment—the President in the chair.

The committee appointed last evening to prepare a list of Premiums for the second Annual Fair, reported that they had fixed upon Wednesday, Thursday and Friday, the 10th, 11th and 12th of October next, as the days for the purpose—that they had chosen the Hon. JAS. A. PEARCE, to deliver the Annual Address—and presented the List of Premiums to be awarded, and the Rules and Regulations to govern the Exhibition—all of which was concurred in.

Mr. CALVERT, President of the Society, offered the following preamble and resolutions:

Whereas, It being deemed by the members of this Society, that the Press is the most effectual means of enabling the Agriculturists of our country to attain their just rights, and maintain the dignity of the character to which they are entitled by moral worth, numerical strength, and usefulness—and

Whereas, The *American Farmer*, published in this city, and adopted as the organ of this society, being deemed a most valuable auxiliary in the progress of agricultural improvement, and to the conductors of which much of the zeal which is now being manifested in the State, may be attributed—and believing that much further good can be achieved by its increased circulation in our own and other States: Therefore, be it

Resolved, That to the Agriculturists of the country it be recommended to raise a fund of $100, to be distributed in premiums to those who may obtain the largest number of *new* subscribers to the said journal for the next volume, commencing in July, 1849, as follows: To the person obtaining the largest list, prior to the 1st of October, a piece of Silver Plate, to the value of $50,—to the next highest, a piece of Plate to the value of $30,—and for the 3d largest list, $20.

Resolved, That each contribution be limited to the sum of $1.

Resolved, That all money subscribed to the said fund, be placed in the hands of ——, and that a list of the contributors be published in the *American Farmer* for October.

Mr. Worthington moved that the blank in the last resolution, be filled with the names of Messrs. Charles B. Calvert and Samuel Sands, which was concurred in, and the resolution as amended, unanimously adopted. The Society then adjourned.

"THE FARMERS' EXCHANGE."

The members of the Society, and others who have visited the rooms recently fitted up for the Maryland State Agricultural Society, have expressed the utmost gratification at the manner in which the plans of the Society have been carried out, and the benefits which must certainly accrue to the Agricultural interest therefrom. The following notice of the establishment, by the editors of the "*American*," embraces a full view of the advantages likely to result from the opening of the rooms by the State Society; and we copy it in lieu of any remarks of our own. A general invitation is extended to the farmers and planters of our own and other States, to visit us when in the city; and we would solicit the aid and co-operation of all our friends, in extending our usefulness, by forwarding to the rooms, for exhibition and distribution, any thing that is rare and useful to their agricultural brethren:

From the Baltimore American.

The Maryland State Agricultural Society has been in existence hardly a year, and already it is beginning to exert a beneficial influence upon the farming interests of the State. As the virtual head of the County Societies it is destined to be of immense service in concentrating the information elicited on all the various subjects connected with agriculture, and, aided by the co-operation of the County Associations, it will be able to disseminate such information and to give form and direction to all the movements having for their object the advancement of rural science or the protection of rural interests.

The Society have recently opened their new Hall, which is located in the "American Building." The rooms are admirably adapted to their purpose, the Hall being large, light, and easy of access from Baltimore street, the great thoroughfare of our city. The circular from the President [published in the April No. of the Farmer] explains the objects which the Society have in view in fitting up and keeping open these eligible and spacious apartments.

The great advantages which will be derived from the establishment of a "Farmers' Exchange," such as that described in Mr. CALVERT's circular, must be apparent to all, and especially to those country gentlemen who have felt the necessity for some means of ready communication and advisement with each other. The Hall has been fitted up with suitable desks and seats for the society when in session, and provided with benches for the reception of samples of seeds, concentrated manures, fine vegetable productions, &c. Shelves and tables are also disposed through the room, on which are found the agricultural periodicals of this country, to which are shortly to be added those of foreign countries, as well as all the standard works on subjects connected with agriculture, horticulture, and the rearing of stock. For the accommodation of farmers and others who visit the Hall, catalogues are kept of the several manufacturers of agricultural implements and of the most extensive nursery men, also the cards of the merchants and dealers in the city who may see fit to furnish them.

A register is also kept, in which are entered the names of all who desire to become members of an association which offers mutual advantages both to the farmer and the citizen. The Hall is under the charge of Mr. SANDS, Secretary of the Association, whose office of the "American Farmer" is immediately adjoining, and who will take pleasure in inducting his country friends to all the privileges of the "Farmers' Exchange."

In short, it is the intention of the Maryland State Agricultural Society to make their Hall a place of agreeable resort for practical farmers and men of science, by the collection of models of improved implements, specimens of new varieties of plants, grains and fruits, and of everything that is rare and interesting, to form a cabinet at once attractive and useful. It should be gratifying to the friends of agriculture to know that such a measure of liberal and enlightened policy has been adopted, and that it is in the hands of some of the most intelligent and worthy men of our State—men who lack neither the ability nor the zeal to accomplish the ends which they have in view. Agriculture, the first interest of the State, the interest upon which all other interests must, in a measure, depend, has been too long neglected, and we are pleased to observe that the people of Maryland are awakening to the necessity of a change of policy in a matter of such vital importance to their future prosperity.

THE QUARTERLY MEETING OF THE STATE SOCIETY was held at the Hall of the Society, on the 2d and 3d ult. Although the number in attendance was very respectable, yet it was not as large as could have been desired, owing, no doubt, to the very busy season, most of our farmers being behind hand with their work, in consequence of the unfavorable weather throughout the winter and spring.

The proceedings of the meeting will be found on another page. The list of Premiums has been arranged, and the Judges appointed to examine all articles presented for exhibition and competition at the next Fair. As ample time is now allowed for those wishing to become competitors, to prepare for the same, we trust that the excellent spirit which is abroad among the farmers and those connected with them will induce a far more extensive exhibition than the first, imposing and respectable as that was acknowledged, on all hands, to have been. The *first* was considered as an experiment; and many, who were uncertain of its success, refrained from making any preparation for an active participation in the same, fearing that their labor would be in vain, but regretted afterwards their want of faith. All such will, no doubt, be anxiously alive to the subject hereafter; and, as the presiding genius of last year will be over the operations of the present, all who may feel disposed to bring their quota to the general stock, will find the most ample arrangements and accommodations for the occasion. As we shall have occasion hereafter to allude more particularly to the various matters connected with the exhibition, we we will now only add, that we hope those who intend to send any thing to the Fair, will prepare for the same in due time; and we particularly call on the ladies of the State to give such an exhibition of their skill as will do honor to our good old commonwealth, and rejoice the hearts of those near and dear to them. Horticulturists, pomologists, florists, &c., are informed that the most ample arrangements will be made for their productions; and it is the anxious wish of the Board of Managers that this department of the Exhibition should be peculiarly attractive. The deficiencies in the arrangements in regard to these departments, last Fall, will be made ample amends for. The exhibitors of Fowls, &c., are referred to the report of the Committee having that department in charge last year, wherein they recommend that suitable coops be prepared for their exhibition, which will add much to the beauty of the scene, and to the exposure of the plumage and general appearance of the birds. Reference is also advised to reports of other committees, which may be of advantage to exhibitors at the next exhibition.

GLOSSARY.

By Dr. HIGGINS, *State Agricultural Chemist.*

(CONCLUDED.)

SULPHURIC ACID, familiarly known as *Oil of Vitriol*, bears the same relation to Sulphur as Phosphoric Acid does to Phosphorus, it being formed by the union of Sulphur and Oxygen.

With Bases it forms a numerous and interesting class of salts, called Sulphates—common Epsom Salts is a Sulphate of Magnesia, that is Sulphuric Acid united to Magnesia. The well known manure called Gypsum is a Sulphate of Lime, that is, Sulphuric Acid united to Limes. Sulphuric Acid in combination with some Bases is found in all fertile soils in the ashes of plants, and is necessary to the perfect development of plants that are used for food, as without it blood could not be formed in animals.

It therefore has a two-fold action as a mauure, one in supplying plants with nitrogen by fixing the Ammonia of the atmosphere, another in furnishing by its decomposition sulphur to growing plants. The way it acts in *fixing* the ammonia of the atmosphere is as follows: the ammonia in the atmosphere is in the state of carbonate, in which condition it is extremely volatile, and when brought to the earth by rain, dew or snow, soon flies off into the air again; but when it comes into contact with Sulphate of Lime, the Sulphuric Acid leaves the Lime and unites to the ammonia, changing it from a Carbonate into a Sulphate—the Sulphate is *fixed* and not volatile at common temperatures, so that it remains in the soil, to be used as food by plants as they require it.

Gypsum is formed in Gas house lime when it is exposed to the atmosphere.

MURIATIC ACID is commonly called Spirit of Salt, because obtained from common table salt. With Bones it forms a class of Salts called *Muriates.*

HYDRO-CHLORIC ACID is the same as Muriatic Acid, and is formed by the union of *Chlorine* and *Hydrogen*, its salts are called Hydrochlorates.

CHLORINE is a yellowish green colored gas.

A very important property of Chlorine is its bleaching power, all animal and vegetable colors being speedily removed by it. Another of its valuable properties is its ability of destroying all con-

tagious effluvia and the noxious volatile principles given off by putrifying animal matter. It is not an Acid, but unites directly with metals forming a class of substances called *Chlorides*, which are found in fertile soils and in the ashes of plants.

NITRIC ACID, called in common language *Aqua Fortis*, is the Acid of Saltpetre, just as Phosphoric Acid is the Acid of Bones, or Carbonic Acid the Acid of Limestone and Marble. It is formed by the union of *Oxygen* and *Nitrogen*. It is formed during thunder storms, lightning causing the union of its elements which exist in the atmosphere. With bases it forms a class of Salts called Nitrates. Nitrate of Soda, at one time much used as a manure, in England, but owed its efficacy to its soda, and not to its acid. It is now rarely used.

LIME is the oxide or rust of a metal called Calcium, and is too well known to need any particular description. It exists in limestones, in marble, in oyster-shells, in bones, marls, the ashes of plants and soils. It is one of the necessary constituents of a fertile soil. Quick Lime is Carbonate of Lime deprived of its acid by heat; on exposure to the air it absorbs Carbonic Acid, and again gradually becomes carbonate or air-slaked; when such lime is mixed with water it then becomes Hydrate of Lime or water slaked,

MAGNESIA is the oxide or rust of a metal called Magnesium. It exists abundantly in rocks and some limestones, in all fertile soils, and in the ashes of plants, being one of their necessary constituents. The "white oak" lands naturally contain it in sufficient abundance, hence no magnesian or Schuylkill lime (which contains from ten to forty per cent. of magnesia) should ever be applied to them; other soils are deficient in magnesia, and for such these limes are *preferable* to all others. Its application is equally as *essential* as *lime, bone dust, or any other substance*, to soils in which it may be *deficient*.

MANGANESE is the oxide or rust of a metal called Manganesium. It is found in some soils and in the ashes of plants growing on them, but is not deemed a *necessary* constituent.

POTASH is the Oxide or rust of a metal called Potassium. It is sometimes called kali, salæratus, pearlash, &c. It is obtained from the ashes of trees, and is used for making soap. It is one of the necessary constituents of fertile soils, and always found in the ashes of plants—to the stalks of which it gives hardness and strength. The Green Sand or Jersey Marl owes its efficacy to Potash. Soda may be a substitute for it to a certain extent; for soils near to salt-water having no more Potash than some in the interior incapable of bearing good straw, produce wheat having fine bright straw, the deficiency of Potash in the soil being made up by the soda in the air from the salt water.

SODA is the Oxide or rust of a metal called Sodium. It is sometimes called Sal Soda, soda ash, carbonate of soda. It is usually obtained from the ashes of sea weed, which are called Kelp or Barilla—South American Saltpetre is a Nitrate of Soda, instead of Potash. It exists in the ashes of plants and in fertile soils, being a substitute for potash to a certain extent.

Potash and Soda are called fixed Alkalies.

Lime and Magnesia are called Alkaline Earths.

ORGANIC MATTER is that which is produced in the animal and vegetable kingdoms by the agency of *Life*, or the substances which are formed by their decomposition: thus wood leaves, straw, flesh, &c. Organic Matter is composed chiefly of Carbon united to Hydrogen, Oxygen and Nitrogen; these four elements which plants obtain from the air, as well as from the soil, are called by the way of distinction, *Organic Elements*.

INORGANIC MATTER is that which exists independently of the agency of Life, as Rocks, Stones, Minerals, Lime, Magnesia, Potash, Soda, &c. Though present, but in small proportions in organic matter, it is *absolutely* necessary to its existence.

The Inorganic Elements present in organic matter are about twelve in number, not all in every case, for some evidently replace each other. They are obtained from the soil, are necessary to the existence of plants, for without a certain number of them, no plant nor animal could exist.

[*Correction.*—In the first part, published in our last, under the head of "Phosphoric Acid," 4th line, for bones, read *bases*.]

ADVANTAGES OF CHEMICAL ANALYSIS IN ITS APPLICATION TO AGRICULTURE.

In the former numbers of the American Farmer, showing the advantages of the application of Chemical Analysis to the improvement and culture of the soil, I mentioned only the evidence given by the examination of fertile soils, which always have a fair proportion of certain constituents, poor soils on the other hand showing a deficiency or total absence of some of them.

The constant presence of these substances in the one case, and their invariable absence or deficiency in the other, is perfectly conclusive, that these substances are productive of fertility, and moreover without them, that it cannot exist.

This conclusion is in perfect accordance with every rule of logic, and in conformity to the plainest rules of common reason and common sense.

But other and equally conclusive proofs exist to show upon what the fertility of soils depend, or in other words, what substances are necessary to the growth and maturity of plants. In striving to raise these plants, we must be liable to continual error, unless we can determine the presence and quantity of the substances necessary to their growth; chemical analysis is the only means by which we can obtain this knowledge.

The evidence of the necessity of these substances is not merely speculative, not adduced by fancy, not depending on the imagination for its existence, nor relying upon any hypothesis for support: but the result of carefully repeated experiments and facts obtained by the most accurate and extended research; not merely of a few isolated facts obtained by one individual in one place, but a large number in different places by different individuals without any sort of combination, and frequently without a knowledge of each other's opinions; facts too not obtained in endeavoring to support any particular favorite theory; but frequently with a very different object in view from that to which they have become subservient, all proving the same thing, and establishing the same principles.

They then are entitled to the most implicit credence; if evidence ever brings conviction to the human mind it should do it in this instance. Those who will carefully examine, and then disbelieve these facts, and the principles depending on them, may with equal reason disbelieve anything or everything; may even disbelieve their own incredulity.

When plants are examined by separating them into component parts, they are found to contain cer-

tain inorganic constituents, which are ever present in them, without which they are never found. These substances then must be deemed *necessary* to their growth, as a *something* without which they cannot exist, because they never have been found without them. We have no other rule to judge of the necessity of one thing to another than this: that it is never found without it—that whenever we find the one, there we invariably find the other; no single exception ever occurring. Thus we find that when two pieces of iron are heated and beaten together, they become *welded;* a certain degree of heat is *always* present when this can be done, and we conclude that the heat is necessary to the operation. It never has been done without the presence of heat, and we necessarily conclude that the heat is of absolute necessity. Again water at certain temperatures becomes converted into steam; we must and do believe that heat is the cause of this conversion, for without it water never becomes changed into steam; heat then is necessary to the existence of steam, because they always co-exist. Equally constant is the presence of certain substances in plants—equally true must it be then that they are necessary to their existence. Wherever plants are found, these substances are found, and without them plants have never been discovered. When they exist in proper proportions in the soil, vegetation flourishes, producing fruit, "delightful to the eye and pleasant to the taste," and capable of supporting animal life; when they are absent or deficient, no verdure quickens, "no solitary tree takes root"—all is barrenness and desolation. I shall not now speak of the different proportions of these substances which different plants require, nor of the different proportions which different parts of the same plant need. It is enough for the present that there *are* constituents which they do *absolutely* want, and which they *can only obtain from the soil.* This may have one, two or more of these constituents, and yet be deficient in others, which none of those present can replace. Plants cannot flourish on such a soil, because they cannot obtain something *necessary* to their existence. Soils differ in different substances which they contain, (this is so well known to all that I shall not prove it) If one particular thing was always absent, mere experiment might determine what it was by adding first one thing and then another, until the deficiency would become supplied, and the soil be productive. Soils originally have the elements of fertility in different proportions, and under cultivation become exhausted of different ingredients, entering into the condition of barren "worn-out lands." Will the most skilful agriculturist pretend to know what is present or in these barren "worn-out lands" by any other process than by repeated experiment in the application of manures or by chemical analysis? On the one hand this knowledge necessary as it is to the successful improvement of the soil, may be obtained by an expense which the increased crops will not repay; and on the other it will be arrived at before any expenditure is made, and with a certainty that every application will be profitable. It is known to many that five or six dollars worth of lime to the acre, has produced many successive crops, each one more than repaying the expense of the original outlay. In this case the lime chanced to be deficient, and was a profitable application; had it been present already in sufficient quantities, the land being deficient in some other substance, and consequently barren, what then would have been the result? No effect would have been produced, and the cost of the lime and the labor of applying it would have been equally thrown away. What is true in regard to lime is equally true as regards any and every other necessary constituent. The above cases are not merely hypothetical; instances have occurred of both kinds, and will again occur unless chemical analysis, the means, the *only* means, by which this necessary knowledge can be obtained, be brought into operation.

Persons of the highest intelligence cannot tell the composition of the medicine administered by their physician, sometimes composed only of a single ingredient, though in the habit of taking it all of their lives; how then can they tell of the composition of the soil containing ten or twelve different ingredients? Unless they know what and how much is present, how can they know what is absent? Unless they know what is absent how can they know what to apply?

This difficulty may be met by applying a manure containing all of the necessary ingredients; but is it philosophical or economical to purchase and apply a manure containing ten or twelve different substances, when but one or two may be required? May not a manure even containing all of the necessary constituents be to certain soils a very dear manure? Is it not much dearer than only to apply what is needed? There is certainly all the difference between the two cases as there is between a person wanting a vest and buying a whole suit of clothes, and another buying only the vest.

One going to work a farm and having already partly enough to carry it on, would act as wisely in buying everything, instead of that only which he needed, as one in buying such a manure to apply to a soil which was only partially deficient in the necessary constituents.

A captain of a vessel would act as prudent in laying in all kinds of stores, when he already had an abundance of some, as a farmer in applying a manure containing all of the elements of plants to a soil which might only be deficient in some one particular element. Soils are never deficient in everything, they therefore never require everything.

The deficiencies which do exist can always be known by chemical analysis, and it therefore is the only certain, and at the same time economical, agency, whereby we can obtain the knowledge necessary to the *improvement* of a barren, or maintaining the fertility of a productive soil.

JAMES HIGGINS, *State Ag. Chemist.*
Cambridge, Dorchester Co., Md.

A GOOD APPLE FROM THE CRAB.

Our estimable friend and whilom correspondent, *James Maygeffin*, Esq., of St. Stephens, Alabama, has, it would seem from the subjoined paragraph, verified the truth of the theory, that good apples may be raised by successively sowing seed of the *Crab Apple* and its products. If his success has not established that other truth, set forth in theory, that the crab apple is the *father* of all other apples, it has at least established the fact, that it is competent to be *the* father of a very good apple. And now, as we have pen in hand, we will venture to ask from his accomplished pen, a *paper* upon this very subject, descriptive of the processes by which he was enabled, and the time it took him, to convert the "*sour crab*" *into one of the best fall and winter apples in the Union.*" We make this request, because we have

reason to *know*, that compliance with him will be a source of pleasure:

"Our friend, James Magoffin, esq., of St. Stephens, has for a series of years bestowed considerable attention upon the apple, and among the many fine sorts he cultivates, has obtained by successive plantings of the seed of the native crab apple, one of the best fall and winter apples in the Union."—*Alabama Planter.*

Now if he who makes two blades of grass grow where only one grew before, is a benefactor; surely he who, by his persevering skill, adds a *new* apple, should also be so considered.

"CHAPPELL'S FERTILIZER" vs. "STATE CHEMIST."

To the Editor of the American Farmer.

In the May number of your journal, on page 366, will be found a communication from Dr. Higgins, "State Agricultural Chemist," which professes to be a "*fair analysis*" of the Agricultural Salts, known under my name, and which calls on me for a "fair" reply, to relieve the article from the erroneous statement therein contained.

Considering the matter of sufficient importance, and in justification of my own reputation, (which I consider to some extent involved in the matter,) I, at once, took advantage of the meeting of the Board of Managers of the State Agricultural Society, then in session, in this city, to send in a written communication, and request the appointment of a committee of their Board to investigate the matter, as I considered that great injustice had been done to me by said analysis. The Board, agreeing with me, that it was of some importance to the agricultural interests of the State, and consequently a matter coming properly under their supervision, have indulged me by the appointment of a very able committee, who will properly investigate, and report accordingly. As it is probable the committee may not report for some time, I do not feel willing that the fallaciousness, both of the analysis and the inferences drawn therefrom, can, in justice to myself, remain unnoticed: and now seek an opportunity to defend the article from the reproach cast on it by the "State Chemist," before the same tribunal to which the Doctor has made known his research and analytical acumen.

In my printed circular, I have stated, in general terms, that the article is composed of *Bi-Phosphate of Lime, and Magnesia, (or Bones dissolved in Sulphuric Acid,) Sulphates of Ammonia, Potash, Soda, and Lime, Animal Charcoal, Silicates of Potash, Alumina, and Magnesia*, combined in proper proportions, and a "*fair analysis*" should have detected *each* of these materials. I wait the report of the committee before going more into detail on the analysis: I will merely add at the present time, that it is rather singular that an analysis which is so accurate as to detect 1 per cent. of ammonia, should certainly have detected 16 per cent. of one and 10 per cent. of another article, besides others equally essential and detectable.

I am really surprised at some of the remarks of Dr. Higgins—the Doctor says, "the almost entire value of Chappell's Fertilizer, depends on its ammonia forming one, and the phosphates forming twenty-three per cent. of its composition;" again, "this is valuable, as *in this* form *alone* can plants be furnished with nitrogen." "Doctors will disagree," and I have as good a right to my opinion as any other chemist. In the first place, I believe that the materials constituting the agricultural salts, have a remarkable influence, not only in forming ammonia, (which is two gases, hydrogen and nitrogen,) but also in condensing and retaining ammonia when formed, whether in the atmosphere, or liberated in the process of decomposition, of such materials as contain nitrogen in the animal charcoal—how can you account for the formation of ammonia in guano if not from the decomposition of the excrement of the bird? it certainly did not exist in the form of ammonia (only in the urate) at first. An analysis of Guano is given at page 50, 3d volume American Farmer, by Dr. Ure, one of the most distinguished chemists in England, as follows: 100 parts, he says, is composed of *Azotized* organic matter, including urate of ammonia, and capable of forming 8 to 17 per cent. of ammonia by slow decomposition in the soil, - - - - - - - - - 50.

Water, - - - - - - - -	11.
Phosphate of Lime, - - - - -	25.
Ammonia, Phos. Magnesia, Phosphate of Ammonia and Oxate of Ammonia, containing from 4 to 9 per cent. of ammonia,	13.
Silicious Matter, - - - - -	1.
	100.

This analysis not only shows a very different result to the 5 specimens analysed by Dr. Higgins, but also that the *organic matter* has, by process of time, become *Azotized*, and thereby, by "slow decomposition in the soil" is capable of affording from 8 to 17 per cent. of ammonia.

Dr. Higgins says, "the organic matter is of no value." The truth is, in addition to the ammonia generated by its decomposition in the soil, it affords carbon, in a condition capable of being converted into carbonic acid, (by the oxygen of the air or water) another essential for the formation of the plant. Neither in vegetable or animal organic matter does nitrogen exist in the form of ammonia—the *latter* being formed *alone* in the process of decomposition. Again, in Turner's Chemistry, 7th edition, page 472, you will find, that "the *only nitrates found native*, are those of Potash, Soda, *Lime* and Magnesia." "Nitrate of potash is *generated* spontaneously in the soil in several parts of the world." "The greater part of the nitre formed in France is obtained by lixivation from certain kinds of *pluster of old houses*, where *nitrate of Lime* is *gradually generated.*" The soils necessary for the formation of nitrates must be *calcareous;* it is to some extent, on this principle, that lime acts as a manure, by attracting the ammonia or the nitrogen of the air. The Doctor says that in the "form of *ammonia alone* can plants be furnished with nitrogen;" now as it is nitrogen and not ammonia that enters into the organism of the plant, is it not a "fair" inference, that the substances above enumerated as entering into our salts, may be the source of supply of nitrogen, as well as ammonia? He says further, that "the ammonia is not only that which already exists, (1 per cent. I suppose he means,) but all that *can be possibly* formed by the elements composing the Fertilizer." "The organic matter," which "is of no use" (according to his assertion,) must refer to the animal charcoal—now in this substance there are such constituents as will form ammonia "by slow decomposition in the soil," and it, in combination with the sulphates, (which escaped the notice of the doctor in his "fair analysis,") will attract and retain, until washed out by the rain, or required by the wants of the plant, a large supply of ammonia, whether given off from

the soil, (the product of decomposition,) or which already exists in the atmosphere.* We find in vegetable albumen, caseine, and fibrine, the same constituents, viz: carbon, hydrogen, nitrogen, oxygen, sulphur, and phosphates. See Turner's Chemistry, page 748.

It appears really quite strange these remarks appear necessary, for the Doctor's own definition of *Nitrogen*, as given in the GLOSSARY on the opposite page, should have led him to the same conclusion, for he there says, that nitrogen is a gas very extensively diffused through the world, entering largely into the composition of plants and animals, and that ammonia is a compound of hydrogen and nitrogen, being a *general product of the decay of animals and vegetables, &c.*

Again, if the salts only contain one per cent. of ammonia, and in "that form alone" it be available for the use of the plant, how comes it, that the use (which is more to be depended on than any analysis) of the article as a fertilizer, has proved it to be capable of producing as large or a larger yield than Guano. This proves one of two things, either that it does contain a larger quantity of ammonia than indicated by his analysis, or that nitrogen can be furnished to the plant in other forms than that of ammonia. How also do you account for the action of *Nitrates* on the soil; if any advantage is derived, (besides their base,) it certainly must be ascribed to the nitrogen they contain.

What the Doctor says about "Sulphate of Soda," and its equivalent of Muriate of Soda, does not hold good, for sulphur is not only essential to be present in the soil for the formation of *Clover*, but equally so (with the Phosphates) for the formation of vegetable *albumen, fibrine*, and *caseine*—had he discovered also the sulphuric acid, used in changing the Phosphate of Lime into a Bi-Phosphate, he would have found it in combination with Lime, every 4 lbs. of which being sufficient to supply the proportion of nitrogen to 100 lbs. grass.

Had he discovered the Sulphate Alumina, he would have found another source of ammonia, for it is a fact susceptible of proof, that if sulphate of alumina is exposed to the atmospheric air, *ammoniacal alum* is formed, which can be chrystalized. This is *prima facia* evidence of the power of a sulphate (or the sulphuric acid, as I believe) to attract ammonia from the air. This is a property possessed by all sulphates and sulphurets, to some extent; sulphate of iron is frequently used by farmers for that purpose. Those earths with alkaline bases, possess the same property, though not to the same degree. Lime also, as before stated, by exposure to the atmosphere becomes nitrated by slow degrees, hence one of the advantages of that article as a manure.

The facts above stated, in combination, will account for the very favorable results which have been produced by the use of our "*Fertilizer*," for it not only contains all the mineral constituents essential for the formation of the plant, besides the ammonia already formed, but has also the power to generate and retain it. The carbonaceous matter in the animal charcoal is of importance also as a source of carbonic acid and *azotized* organic matter for the use of the plant.

Now, if all the inorganic or mineral constituents are present in the soil, with a sufficient stock of carbonacious materials for the supply of the young plant, and vegetable life is imparted by the deposit of the seed, as soon as germination commences a new play of affinities takes place under the favorable influences of heat, light and moisture. These affinities are as marked and distinct as when vegetable matter is undergoing *decomposition*; the *death* of the one furnishes the materials of *life* for the other, and the effects produced thereby is not confined to the manure alone, whether mineral, animal or vegetable, the soil to some extent partakes of its influence, for there can be no decomposition without new formations, the same elements still existing, but in new combinations, and at the moment of change of relations electricity is evolved, (it being the effect and not the cause;) this holds good both in the vegetable and animal world; how far these influences effect and improve the soil, it is impossible for us to say, but such no doubt is the fact. Air, water, light and heat are all necessary, that this play of affinities shall be carried on.

Regarding the quantity of sand found by the Dr. in his "fair analysis," (it appears as *rich* in this article as several specimens of guano he analysed)—perhaps if he had pushed his research a little further he might have found it to consist of silicates of potash, lime, magnesia and alumina, a part of it sulphate of lime, formed in changing the Phosphate of Lime into a Bi-Phosphate. It appears also to be as rich in organic matter as the specimens of guano he analyzed, and reported in the same communication.

In comparing our *agricultural salts* with *guano*, the *cost*, and *the quantity used* per acre of the two articles, should always be taken into account. What I have said in the printed circular in reference to its quality, compared with that article, refers to its *cheapness*. I believe, (and in this I am sustained by the most respectable evidence from *actual experience*,) that the same amount of money expended in both articles, the final result will be in favor of the Fertilizer, particularly on a crop with clover; its peculiar properties are not only on the grain crops, but on clover particularly *its effects are more certain than guano*, and if a larger yield of clover is obtained, the crop of grain being equal, the preference should be given to the Salts; it is in this way its effects are more lasting, and consequently cheaper of the two articles. If the farmer succeeds in getting his ground well set in clover, he then knows how to proceed with his after crops, without having his *soil* or his *manure* analyzed.

The insinuation that the "substance is not compounded by exact weight," and therefore "constantly liable to variation as to quantity," is gratuitous. The greatest care is taken that each barrel shall contain precisely the same materials, and a long experience in pharmaceutical and chemical manipulation, has enabled us to prepare the article with great exactness—self-interest alone, would be sufficient to prompt us to keep up its quality, if actuated by no other motive.

The Doctor winds up his remarks by stating for the information of "*all those whom it may concern*," that "the value of manures can only be determined by chemical analysis, or those who purchase will, and do suffer continued disappointment and loss." This would all do very well if the analysis, when made,

*The Doctor reiterates, (in his N. B.,) as wishing it to be distinctly understood and remembered, in speaking of Guano, what he had before said in reference to our salts, "The quantity of ammonia comprehends that already formed, and *all* which *can be* produced by the materials existing in it." How far this is true can be judged of by the analysis I have given by Dr. Ure, of Guano, and the remarks which follow.

could be depended on—but in *my* humble opinion, *one good practical* and profitable *result*, is worth half a dozen analyses, and it is to such experiments as have been successfully tried with our Fertilizer, that a farmer can with much more certainty depend than on the analysis of any professor or chemist.

Fearing my remarks may be extended beyond the limits you can allow me, I close by a quotation from "Fresenius' Chemical Analysis," Bullock's edition, page 15.

"For the human mind is constantly striving for the attainment of truth; it delights in the solution of enigmas, and where do we meet with a greater variety of problems of more or less difficult solution, than in the province of chemistry? but as a problem, an enigma, for which, after long pondering, we can find no solution, wearies and discourages the mind, so, in like manner, do all chemical investigations of the object in view be not attained, if our results do not bear the stamp of truth—of unquestionable certainty. A *half knowledge* is therefore, in every province of science, but principally here, to be considered *worse* than no knowledge at all, and the student must, therefore, be especially warned against a mere *superficial* cultivation of chemical analysis."

P. S. CHAPPELL.

Baltimore, June 1, 1849.

ADDRESS BY ALBERT E. BASFORD, ESQ.

[Delivered before the Agricultural Club of the 3d Election District of Kent Co., and by unanimous vote of the Club requested for publication in the American Farmer.]

If, under any circumstances, I had the ability to treat the subject, which has called us together this day, as its importance requires, the desultory attention bestowed upon it in intervals snatched from imperious duties, must plead as some extenuation of any want of justice I may do it. The unbroken earth does not assume the order and beauty of a well trained garden under a few magic strokes of the spade and rake: nor does the chaos of man's first tumultuous reflections upon any subject reduce itself into any order of solidity and symmetry without long protracted thought and patient labor. This I have been unable to devote to it. Agriculture is the most ancient and honorable occupation of man; for though the ground was early cursed for his sake, and it was declared that by the sweat of his brow he should eat his bread, it would appear as though the Deity attempered the justice of the decree by his darling attribute of mercy, in assigning him not only an honorable employment, but one from which by his industry and application, he could almost redeem the curse. The earth became, therefore, a great machine, given to man to be worked and fashioned to his purpose—and its cultivation has since proved itself to be prolific of the greatest good to the beings who inhabit it. It is the foundation and support of every trade and occupation of man. From it we derive the sustenance we daily enjoy and the raiment with which we are clad. But it is not only an individual enjoyment which it affects: it is the great conservative principle of our union upon which all other interests are dependent. It is this which will make our country glorious in the true strength of a nation: intelligence, virtue, enterprise and industry. Agriculture is indeed the substratum upon which is erected the glorious edifice of our national prosperity. But its products not only contribute to our private enjoyments, our domestic relations, our amelioration at home, but they form the basis of our immense foreign commerce; thus constituting strong ligaments to bind us to the great brotherhood of nations, tending to preserve a spirit of peace and amity by the influential inducements of reciprocal advantages and benefits. Indeed it may be considered the mainspring, the *primum mobile* of nations; and upon its prosperity or decline may be read their fate. But I have said that agriculture was not only one of the most important, but the most honorable and exalted employment of man. This was emphatically so in the days of our forefathers, and in the age of less improved agriculture. His very situation superinduced it—no one felt so sensibly as the farmer, his immediate dependence on God for his peculiar blessings—he was compelled to look directly to the bounty of Heaven. Surrounded by all wonders, beauties and mysteries of nature, he seemed to reside in the midst of the great theatre of God's power, and thus to feel an unusual proximity to his Creator. The varied forms of life, activity and pleasure, which he observed at every step in the fields, would lead him irresistibly to the source of being, beauty and joy, and raise his mind from the contemplation of nature up to nature's God. But in this era of increasing agricultural knowledge, when a host of sciences, with their inspiring aids, are coming rapidly to the assistance of the farmer, and bestowing their valuable donations upon him, when from their acknowledged advantage and successful adaptations to his interest, he is compelled to study their lights and bearings upon his profession; who shall say that it is not a most honorable one. No avocation offers a greater field for experiment and for the application of science directed by a sound judgment. No pursuit tends more to expand the mind, call into vigorous exercise all the mental powers, and improve the physical organization. Thus we see that agriculture and science united, become the fruitful source of knowledge, and we are told "the pursuits of knowledge lead not only to honor, but to happiness," "length of days is in her right hand, and in her left are riches and honor." If I lay too much stress on this part of my theme, in vindicating the claim of agriculture to a dignified and exalted station, it is because that pursuit has been too long and too greatly underrated. If you think my fancy too exuberant, here let me repeat the language of that distinguished writer, Mr. Allison: "He, in whatever situation he may be, who in the study of science or the pursuit of his profession, has described a wiser method of preventing poverty or of shielding misfortune, who has suggested additional means of increasing or improving the beneficent productions of nature, has left a memorial of himself, which can never be forgotten, which will communicate happiness to ages yet unborn, and which in the emphatic language of Scripture renders him a fellow worker with God himself, in the improvement of His creation." If such are the pleasures, the benefits, the honors that enure to this noble pursuit, how assiduous should every one engaged in it be to advance its usefulness and promote its interest. And these can be consummated in no better way than by the formation of agricultural societies. Already where they have existed and been conducted with proper spirit and energy, the most eminent success has attended them, and results of immeasurable importance have been produced. By meeting in such assemblies, and comparing their individual views, experience and practice, each one becomes as it were a compend, receptory, a magazine of the aggregated information of the whole. Different plans for the improvements of lands, various modes of

culture being here contrasted, new thoughts are evolved, important improvements are suggested, useful ideas eliminated by this collission of mind with mind. After such deliberation and comparison, he must be an indifferent observer indeed, who does not bear back to his farm some knowledge, some valuable hint which may aid his judgment and better his practice. Our views, says the immortal Locke, are not extended to all that has a connection with it. We see but in part, we know but in part, and this might instruct the proudest esteemer of his own intellect, how useful it is to talk and consult with others, and to find out whether another man may not have notions which escaped him, and which his reason would have made use of, if they had come into his mind. He, who, in the prosecution of his business, is confined to the narrow and secluded path of his own observation, however capacious his genius, or indefatigable his industry, will encounter many difficulties. These may be happily obviated by meeting in such associations as the present—by comparing notes and inter-communicating opinions. As it is said by our philosophers, that no two spectators ever see the same identical rainbow, so it is, perhaps, true, that no two minds ever look at a subject from the same point of view or through the same medium. "And as the Heavenly constellations guide the mariner in his course, over the trackless desert of the ocean, so the constellations of the mind will illuminate the pathway of truth." Indeed there is no knowledge so complete, but that it may receive correction in passing through the minds of many.—He whose recorded life was intended to be our perfect example, is described as gaining instruction in the Temple, by hearing and asking questions. And if the great philosopher, Sir Isaac Newton, could say in all the sincerity of a truth humbled spirit, "I am but as a little child, picking up here and there a pebble on the shore of time, while the whole ocean of truth lies undiscovered before me," how diffident should we be of our individual opinions, who have scarcely so much as stood upon that shore. Another important benefit arising from this association is the fraternization of the members. We all know how differences in religious tenets and political opinions tend to alienate the feelings, estrange the affections and endanger that cordiality, which should exist among the citizens of the same neighborhood. But here you have a nucleus of compromise, a rallying point for the affections, a common platform, where each and all, animated by a generous enthusiasm, may frequently assemble, stimulated by no other emulation than that of bringing the most valuable amount of useful information to the general stock. Here all jealousies, all conflicting opinions, either of church or state, being thrown aside, you may meet together as the brotherhood of the soil, and while you learn to respect each other as sharing in the same great pursuit of life, your minds will be imbued with generous ambition to excel in the cultivation of your lands and improvement of your stock. Indeed you will become better neighbors, better friends, better citizens. And is it not time that we should adopt some plan for the improvement of our land;—the ruinous cultivation they have undergone, and their impoverished condition are too manifest. In the cultivation of our lands, we have outraged every principle in nature—I believe that I have as much respect and veneration for ancestry as most persons, but am compelled to say that in the tillage of their lands, our forefathers pursued a course ruinous in the extreme, and which has led to their sad deterioration. Their unfortunate system, by the usual rule of hereditary transmission, had been bequeathed unto us as a rich legacy; and beautifully would we have adorned this confidence and perpetuated their unfortunate injunctions, had not the light of science soon burst forth and exposed to us our egregious errors and enormous blunders, from which our correcter sense now recoils with unmitigated horror. I say, I wish to cast no obloquy upon our ancestors—the imperfect systems they pursued, the perpetual exhaustion of the lands were the result of the circumstances under which they lived; but in this age of enlightened opinions and scientific investigation, we can plead no such extenuation. If they had enjoyed the same advantages which we possess, they would scarcely have been compelled to employ them, such was the almost spontaneous luxuriance of our youthful soil; but too sanguinely confident in its permanent visibility, they subjected it to such distressful and harrassing tillage, that its recuperative energies were well nigh destroyed, its vitality exhausted, and its powers of fructification almost annihilated. And such, perhaps, had been the case, if science had not generously come to our aid, and offered us her generous assistance. Guided by her teachings, worn-out lands, almost abandoned, have been reclaimed; wild marshes and low morasses changed into rich pastures; and indeed the whole surface of the country has experienced her renovating influence.

Desultory opinions, inveterate prejudices, and hereditary notions are yielding to analysis and the application of chemical principles. The genius of invention too has added its splendid gifts to the rich charities of science, thus lessening the burthen of the farmer's toil and mitigating the sanctity of his labors, by conferring upon him useful implements and valuable machines. There was a time when all this dissertation about science and the application of scientific principles to agriculture would have been looked upon as ridiculous and absurd, and superstitious conceit and blind prejudices, would have laughed it to scorn. People would have shaken their sapient heads, and cried humbug! And many have done so, but in a short time having discovered that they were rather premature in their opinions, and that the evidences were too conclusive against their anathemas, and feeling an uneasy consciousness of their awkward situation, they have been reluctantly compelled again to shake those same sapient heads with that very common, but ominous ejaculation, "well really who would have thought it?" I say there was a time when the opposition of skepticism and deep rooted superanuated prejudice were arrayed against scientific farming, and we are not surprised: the history of ages reveals to us in letters of living light on every page, the same story of prejudice and stupidity, of obstinate dogmatism and of inveterate opposition. Every science, every great discovery, even truths now well known and established, have forced themselves into existence and fought their way into credit, not only unaided and unencouraged, but against all the virulence of ignorance and all the bigotry of superstition. How then can agriculture expect immunity from the common destiny of all innovations. Why even in this day of extended knowledge and vast scientific attainments, surrounded as they are by the evidences of the successful appliances of those things to the tillage of the soil, there are persons who still sneer and smile with contempt upon what they jeeringly term book-farming. To such I will merely remark, science inves-

tigates the nature of soils and manures, explains the constituent elements of plants and the means by which soil, manure, and plants may be adapted to each other; and the day is fast approaching, when he who shall cultivate his land without the subsidies she offers, will be looked upon with as much consternation as a physician would be, who knowing nothing of anatomy and physiology, might attempt to prescribe for his patients; aye, such an one will be regarded as an antiquated curiosity, a quack, a miserable bungler, destroying the life, the vitality of this beneficent earth, and marring the beauty of God's fair creation. To those, who are impelled by a laudable ambition to ameliorate the condition of their lands and a general spirit of emulation to exalt the dignity and value of their avocation, I say persevere; you have every incentive to stimulate you. The world has never awakened to such a perception of her interests and power as she now presents—through the mighty continent of Europe, the Genius of Liberty, with an omnipotent arm, is hurling tyranny, oppression, ignorance and superstition from their high places; and the promise of a bright and glorious era is dawning upon that beautiful country;—the proclivity of every other profession is towards improvement. Trace the sources of power at this day in any direction and they resolve themselves into knowledge. Man points with the very sunbeam of Heaven: he but invokes the aid of steam, and space and distance are almost annihilated and controlled; by his genius "he sends the electric spark, his quick vassal, round the world"—in fact, aided by developments of science, no place appears too remote for his grasp, no heavens too exalted for his touch. But to stimulate you in the impovement of your lands, you have another most powerful motive, I mean the amelioration of the health of yourselves and families. To you nature indeed has been most lavish of her bounties. You have a soil naturally among the best in our wide-spread country, and which with proper encouragement yields abundantly to the wants of the farmer. With no stinted hands have the gifts of a kind Providence been strewed around you. The earth and its increase, grain, fruits, animals, and flowers, all lend their tributes to supply your wants; but what avail all these things without the enjoyment of health.

It is unfortunately too true, that from the low and level nature of our land the rivers in many places spread themselves over the ground, forming large swamps and pestilential marshes, the atmosphere above which is constantly filled with the most noxious exalations; and it is not necessary that these should be very extensive that their influence should be deleterious to health; even ditches, stagnant pools, motionless water, each exhale their foul effluvia and exert their morbiferous influence. And those who are not in immediate proximity of those evils, need not congratulate themselves upon escaping their baneful influence. For the whole atmosphere, oppressed with exhalation from these sources, and fecund with disease, is borne on the wings of every breeze over vast areas, and the surrounding air soon teems with the same unfortunate principles. From this state of things your efforts conducted with skill and perseverance may soon restore you. By draining the marshes, opening the ditches, cleaning meadows, and a general improved system of agriculture, what was formerly considered a curse and a useless appendage to your property, will become a lucrative source of revenue. This in many places has already been accomplished; intelligent farmers have told me, and I have no doubt it is the experience of some of you, that many of those lands, covered for the most part with stagnant water, and looked upon as nothing but barren wastes, having been reclaimed from their sad condition, proved to be of the richest character, and in a short time more than remunerated them for the expense incurred in the operation; thus producing two-fold benefit, the improvement of the health and the enlargement of your capital—or, to use the vulgar saw, "killing two birds with one stone."

This is a part of my subject I cannot urge too strenuously, for I think there are none of you, who do not firmly believe that the nature of the lands I have described are the fruitful sources of all the bilious fevers, remittent and intermittent, and the numerous other diseases that follow in their direful train. During a visit to a part of New Jersey a few years ago, I conversed with a number of gentlemen in that State, on its then apparent healthy condition. They told me then, in many parts of it they once suffered very greatly from the same unfortunate diseases I have just mentioned, but that now they were almost banished, or what remained were of the mildest form. Upon asking the cause, they replied without hesitation, that it was the clearing of their wild meadows, draining their marshes, opening their ditches, and the general improvement in their cultivation. These things should excite serious reflection. But there is another motive, and a powerful one, which should prompt you to engage in the great work of agricultural improvement. It is the call of duty. I was much pleased with a remark of Gen. Tilghman's, in an agricultural address the other day: "That he who has been placed by Providence in charge of a farm and family, has a high and responsible duty to perform, that he has to see whether the five or ten talents he may have received have become as many other talents." And indeed, it is true you are but stewards, and in a moral sense you will have to render a strict account of the trust committed to you. Every man has, or ought to have, some sense of what God and the world requires of him, some consciousness, however indistinct, of the purpose for which the advantages of property or fortune were given him; and to every one, time as it passes has a voice which no mortal heart can forget. It seems to ask us what we have done, and what we are doing, and in every periodical return it leaves inevitably "that bitterness of woe which the heart only knoweth."

Who can look upon that portion of God's earth, committed to his charge, its clustering woods, its open glades, the fields glittering with golden harvest, the orchards white with promise or bending beneath the ripened fruit, the ground pranked with a thousand beauteous flowers, the flocks and herds roaming from pasture to pasture. I say who that looks upon these things, but must feel not only a sense of profound gratitude to the bounteous donor, but a weighty responsibility of the charge committed to his care. I have now stated as emphatically as I could, some among the inducements which should encourage in this noble cause you have undertaken, and as no good thing was ever accomplished without some enthusiasm, I wish to see you spiritedly, ardently, energetically engaged in the future prosecution of it. In these things it is not sufficient to think, to ponder, to speculate, but you should act, and act at once. The happy apothegm, "that procrastination is the thief of time," is strikingly appropriate to agricultural improvement—week after

week, month after month, year after year steals on. Many see the example of their neighbors, they read in the agricultural journals of the successful adaptation of science and study to the improvement of lands, they are convinced of the necessity of a thorough regeneration in their mode of farming, and yet from some unaccountable indecision and apathy, they defer their efforts from time to time, until their lands will have almost lost the recuperative energy essential to their permanent improvement. It will be scarcely necessary to remark to you, who have commenced this noble effort, that to ensure success requires constant attention, assiduity and perseverance. Patient labor alone is the price of substantial good. Leave nothing that is necessary in any matter undone; we rate ability in men by what they finish, not by what they attempt. Remember, it is the hand of the diligent which maketh rich—everything which we see with admiration in the world around us, or of which we read with delight in the annals of history, the acquisition of knowledge, the discoveries of science, the achievements of successful heroism, the establishment of this world's wisdom, all have sprung from the same source, a steady and indefatigable pursuit.

"Are you in earnest? seize the very minute—
What you can do, or dream you can, begin it;
Boldness has power—Genius, magic in it—
Only engage, and the mind grows heated;
Begin it, and the work will be completed."

It has no doubt been thought that I should say something about the practical adaptation of science to agriculture, more especially about agricultural chemistry and the rules for the application of certain artificial manures to the different kinds of land, but my opportunities for practical observation have been so limited, I must beg respectfully to be excused. But, even had I the ability to explain all the numerous bearings of science upon agriculture, as exemplified by experience, the subject is too varied and elaborate for an address like the present. It is one that requires close observation, mature judgment, and some study. I would, therefore, recommend the study of the natural sciences to such as have not already directed their attention to them. And do not be intimidated or discouraged by the imagined magnitude of the undertaking. Knowledge of this kind, sufficient for all useful purposes, may be acquired with less trouble and mental labor than you would probably imagine. Remember it is the distant hill which appears so steep and arduous; a near approach renders its acclivity less formidable. As you enter upon this work too, what at first appeared a task will become a pleasure; your feeling and faculties will become interested in it; your mind will become expanded and invigorated; you will not only become more successful tillers of the soil, but happier and wiser men. For want of this kind of information among the people, the prejudices and unwillingness of some to avail themselves of increasing light, are among the list of difficulties, which hinder improvement. The new modes of culture are thus kept down from having their proper influence, and many a farm which might be made lucrative is suffered to run to waste, and may be any thing but a source of comfort or profit to its owner. The diffusion of agricultural periodicals, of lectures, and all suitable encouragement to the obtaining higher standards of agricultural knowledge is what I would especially recommend to every one who feels an interest in the subject, or in the welfare of his country. You have everything to encourage you with the cheering augury of such agricultural improvement, as will be productive of happy effects upon our country and the world. Have your lands been badly managed—your soil impoverished? remember there is a hidden richness even in comparatively exhausted soils, which it needs only the rightful application of the true principles of culture to bring out; that within your reach there are a thousand means to supply the deficiency, and that a thorough cultivation may enhance its value beyond even its original native opulence. It is with subjects of gratulations like these that the farmer has such cheering omens of success. And the formation of societies for agricultural improvement, and the attentive perusal and study of agricultural journals, are the unerring harbingers of our success. I then repeat, it is to Agriculture we must look as the oldest employment, the most necessary occupation of man. Honored, it will make our country glorious in the true strength of a nation, its virtue, intelligence and enterprise.

ON THE CULTITATION OF CORN FOR SOILING.

To the Editor of the American Farmer.

It has occurred to me that a few suggestions on the cultivation of corn for the purpose of soiling cattle, from one who has had some experience, may at this time not be inappropriate or unacceptable to some of your readers.

To those who have small farms, and those not well set in grass, and at the same time have more stock than their farms will sustain, I think I may say without any apprehension of disappointing those who are disposed to make the experiment, that *drilled corn*, will, if judiciously managed, enable them to pass through those months,

"When scorching suns the thirsty earth
"Of all her treasures drain,"

greatly relieved from those anxieties which *will* disturb some farmers when their pastures are "cut short."

The farmers at the North and East know the value of this crop, and have written much on the subject, yet how few in Virginia, at least as far as my observation extends, ever cultivate it. Having said this much by way of preface, I come to the subject matter of my communication.

Preparation of the ground.—To ensure success it is necessary that the ground, if not previously very rich, should be highly manured, and care must be taken that it is nicely prepared by deep ploughing, (subsoiling if practicable) harrowing and rolling.

Manner of sowing and quantity to the acre.—There are two modes of sowing adopted at the North: either broadcast or in drills. I prefer and have adopted the latter method, as I am thus enabled to cultivate it and keep down the weeds which might otherwise be troublesome. Those who determine to sow in drills should lay off the rows three feet apart, and from three to four inches deep with a two horse plough, and then sow in the following manner. Walk on the edge of the furrow and sow at the rate of a handful to two paces, or about thirty-five or forty grains to the foot. To cover expeditiously, pass a folding cultivator drawn in to 18 inches, (having first removed the front tooth,) down the furrow, in which the horse should be made to walk. Not less than six or seven bushels will be required to sow an acre, if it be drilled; and more than this if you sow broadcast.

Quantity sown at once.—I would advise that not more than one-third of the crop be sowed at a time, and after the lapse of three or four weeks sow another third, and so on: in this manner a succession will be ensured which is very desirable. One acre managed in this way will be amply sufficient to carry six head through the summer months. When five or six inches in height work it with the cultivator, and as often as convenient afterwards till it is ready for the scythe, which will be in five or six weeks, and if it is mowed three inches above the ground, and before it has jointed, it will again put up and yield a second crop; in some instances far better than the first. Never mow when the dew is on it, or immediately after a shower, as it will then become covered with grit and the cattle will not eat it. The best time is near the middle of the day, and should be cut and hauled in twenty-four hours before using it. The cattle should be provided with stalls and troughs, and the corn passed through the cutting box. A lad of twelve years of age, provided with a guillotine cutting knife, and his cattle so fixed as not to interfere with each other, can easily attend to 8 or 10 head. I know of no green food which is preferable to this for milch cows, and strongly recommend it to those who have dairies.

A Subscriber in Va.

Premiums on Wheat—Public Spirit.—Messrs. Coleman and Cunningham, of Augusta, Ga., have offered $250 as premiums for the best wheat, grown in Georgia or any of the neighboring States, the farmers and planters of which do business at Augusta, where the mills of Messrs. C. & G. are situated, viz:

1st.—$100 (in a Silver Pitcher) for the best 50 bushels of wheat.
2d.—$75 for the 2d best, do.
3d.—$50 for the 3d best, do.
4th.—$25 for the 4th best, do.

The grain to be delivered at their Mills, in the city of Augusta, on or before the first Tuesday in September, 1849. It will be examined and the premiums awarded by three competent and disinterested gentlemen.

The Southern Cultivator, in publishing the above, remarks:

"The offer of two hundred and fifty dollars in a way that permits all the premiums to be taken without any mistake, is as liberal as it is wise, on the part of the gentlemen who hold out these inducements for the culture of wheat. Cotton is so low in price, and its production so much over-done, that some other branch of agriculture must be resorted to, or the farming interest of this region will soon reach an unfortunate condition. Intelligent men believe that grain culture will afford much relief to the planters of Georgia and South Carolina; and a well-directed effort is to be made to accomplish that object. Lime, burnt at Shell Bluff, on the Savannah, will be delivered in this city, by water, at a cheap rate, for agricultural purposes. In short, nothing which capital and enterprise can do to fertilize the soil and make it yield good crops of wheat and other grain, will be omitted.

"A number of gentlemen are now plowing land from 8 to 12 inches deep; working four good mules to the plow, and liming the sub-soil turned up to the air, light, heat and frost. This ground will be seeded in wheat this month and rolled.

"Messrs. C. Cunningham and W. Eve, of this city, are setting an example of *deep tillage* worthy of commendation."

We rejoice to see so noble a spirit being manifested at the South; and we sincerely hope that the examples now being presented, by the farmers of our own and neighboring States, may not be stayed in their progress until all the old States partake of the same feeling which is actuating the husbandmen of Middle States.

Premium for Corn.—Our attention was particularly drawn to the subject noted above by recollecting that a proposition somewhat similar was made known to us, some month or two ago, by *F. H. Jenks*, Esq., merchant, of Bowly's wharf, as being in contemplation by the commission merchants of our city. The plan was to offer $100 for the best crop of corn made in Maryland or neighboring States trading with this city. We hope the project will be carried into effect, as we have not the least doubt that the sum necessary to accomplish the object could be raised, in a few hours, by any of the respectable class of our merchants with whom it originated.

A Gem-like Example.—There is something *refreshing* in the subjoined account of the proceedings of a meeting of *Farmers*, *Gardners* and *Manufacturers*, held on the 9th ult., at Dedham, Norfolk county, Massachusetts. The sons of the pilgrims have a notable way of doing things whenever the public good is to be promoted. There we find the *manufacturers* standing shoulder to shoulder, moved by the same generous impulse, and equally as zealous as the tillers of the earth, themselves, in the organization of an *Agricultural Society*. Such an example is worthy of all praise, and should not be lost upon the intelligent and patriotic of our country; but, as we trust, will act as an incentive to *all*, whether they belong to the agricultural classes or not, to contribute towards the support of all associations which are already, or may be, formed for the improvement of the husbandry of the country, as no truth is plainer than the one which inculcates the doctrine—that agricultural prosperity is a guaranty of general healthiness to the body politic.

AGRICULTURAL MEETING AT DEDHAM.

On Wednesday, the Farmers, Gardeners, and Manufacturers of the county of Norfolk, met at Dedham, for the purpose of forming an Agricultural Society for the county.

A large number attended the meeting—not less than 150 persons—and after some preliminary addresses they made choice of the Hon. C. F. Adams to preside at the meeting. Afterwards Committees were appointed to draft a Constitution for the Society, and to solicit subscriptions.

Hon. Marshall P. Wilder, of Dorchester, was elected President of the Society, and a number of Vice Presidents were chosen.

The subscription paper for funds was circulated rapidly: Hon. C. F. Adams put down $300; Hon. B. V. French $100; and Hon. M. P. Wilder $100.—

These were independent of the $5 which each must subscribe in order to become a member of the Society.

It was then proposed that gentlemen present from the principal towns should name sums that they would undertake to obtain from donors, and from such as would join the Society as members.

Two gentlemen from Roxbury then pledged that city for $500. Other gentlemen pledged Dorchester for $400. Wrentham was pledged for $200, and others followed the example till upwards of $2700 were undertaken to be raised for the Society.

Thus in the course of an hour or two, nearly the whole amount required by the Statute to entitle the Society to the full sum of $600 annually from the State Treasury, was made up.

Much animation and the very best spirit prevailed through the day. A vote was passed requesting the officers to make immediate application to the Legislature for an act of incorporation.

Votes of thanks were passed to the gentlemen who had so liberally subscribed, and to such as had made exertions to call the Assembly together.

We congratulate the Farmers, Horticulturists, and Manufacturers of the good county of Norfolk, on their success in this great effort to form a society for their mutual benefit. We trust they will be as much benefitted by this movement as the societies in the other counties have been.—*Mass. Ploughman.*

CHAPPELL'S FERTILIZER.—We had hoped to receive in time for this No., the report of the committee appointed by the State Society in regard to this subject—but have been disappointed. The committee are having an analysis made by several chemists, but have not yet obtained the results from all of them. As much interest has been excited upon the subject, and an anxiety felt to learn the result of the investigation, we deem it proper to state, that we have seen an analysis made by Dr. Stewart, of this city, and have understood the results of another by Dr. Muse, of Cambridge, both of which correspond very closely to that made by Dr. Higgins.

MECHANICS' FAIR.—The second Annual Fair of the Maryland Institute for the Promotion of the Mechanic Arts, will take place in this city, during the Fall, opening on the 27th September, and closing on the 13th October. Farmers and others who may be in attendance at the Cattle Show, will also have an opportunity of visiting a most splendid exhibition of the products of the skill and genius of the mechanics and artizans, not only of our own State, but of the whole Union. We can promise a most agreeable treat; rich and gorgeous as was the display last Fall, there is reason to believe that the second exhibition will far surpass it.

GEO. BOMMER CO'S CHEMICAL MANURE.—We have received 6 barrels of the Manure, advertised in the *Farmer* for several months past, which at the request of the company, we intend placing in the hands of some of the most eminent farmers of our own and neighboring States for trial.

FARMS FOR SALE.—We refer those wanting to purchase Farms near this city to the advertisements in our pages. These farms are highly improved, and are worthy of attention.

A FLOOD FENCE.—We would invite attention to the model of a Flood Fence, deposited in the Society's hall by Col. Capron—he has erected the fence on his farm at Laurel, and it will, we have reason to believe, be found to be very valuable. A drawing and description of it will be given hereafter.

In the review made by Dr. Chappell of the analysis of his "*Salts*," on page 406 of this No., 2d column, an error marked in the proof-sheet was left uncorrected. In the paragraph commencing "This analysis," after the words, "*organic matter*," strike out the words "*has, by process of time, become*," and insert "*being*"—so as to read as follows: "*the organic matter* BEING *Azotized.*"

HORTICULTURAL.

WORK IN THE GARDEN.

Water Melons, Canteleupes, Cymblins and Cucumbers.—Attend to these; keep them clean of weeds and grass, and, if not done before, thin them out so as to stand from two to three plants in a hill; and, if the weather should prove dry, have the vines watered just before sun down.

Asparagus beds should be kept clean.

Sweet Potatoes.—Draw earth around the hills, so as to enlarge them, and thereby accelerate the growth of the roots: lay the vines off with regularity.

Irish Potatoes—If you have not planted your Irish potatoes, you can still do so.

Cauliflowers.—The early cauliflowers which may be now producing their heads should have the leaves pressed over the flowers, to protect them from the sun and rain. If there should be a drought, be sure to water the plants, as moisture is indispensable while the flowers are forming. As a receptacle for the water, in hilling the cauliflower, it is best to form a basin-like hill; this retains the water, and enables it to soak down to the roots.

Any plants of late sowing, which are large enough, should be set out the first rainy, cloudy or moist spell. After planting, give the plants shade, and be sure not to let them suffer for the want of water.

Cabbages and Savoys.—Any plants, of sufficient size, which you may have should be set out the first wet spell of weather. As a precaution against the worms, make a cream-like mixture of 3 parts loam, 1 part soot, and 1 part flour of sulphur. As you draw the plants, insert the roots into this mixture up to the lower leaves; set the plants out of the basin or piggin containing the mixture, so as to let as much as possible adhere to the roots and stalk, and you need not fear the cut or other destructive worms.

Brocoli.—Attend to these the same as to your cauliflowers.

Sowing Brocoli Seed.—Early in this month sow some seed, to produce a succession of heads in winter.

Borecole.—Set out your plants.

Celery.—Transplant your celery plants into trenches; protect them by a covering, and keep them well watered. In the preparation of your ground, spare neither depth of digging nor manure.

Peas.—Select a bed not too much exposed to the sun, but not in the shade, and drill in a few rows of peas; the Marrowfat will succeed best at this season of the year. Should the weather prove dry after they are planted, water the drills.

Lettuce.—Set out your lettuce plants to head, and sow seed to form a late crop. Recollect that, in times of drought, you must be liberal with the watering pot.

Radishes.—Sow radish seed, at intervals of a few days, throughout this month.

Small Sallading, of all kinds, should be sown on shady borders. In dry times, give copious waterings just before sun down.

Kidney Beans may be planted, with success, throughout this month; but, should the weather be dry, they must be watered, as it is essential to keep up a moderate degree of moisture in the earth. Should the earth be dry at the time of planting, give the drills a soaking watering.

Carolina Beans.—A few hills of these may be

planted still, provided you get them drilled in by the 10th of the month.

Carrots and Parsnips.—See that these are thinned out and kept continually free from weeds and grass. Seeds of these may still be drilled in up to the 10th of the month.

Beets.—Thin and weed these out; but, if you have been so remiss as not to have planted any, you may still drill in the seed up to the 10th of this month.

Turnips.—Prepare a bed and sow a patch of early turnips.

Endives.—Set out your endive plants, and sow seed for a later crop.

Okra, Tomatoes, Egg Plants.—Earth up the plants you have already planted out, and set others out for later crops.

Onions.—Thin out and work your onions; but don't hill the earth around the bulbs. In dry weather, water them freely.

Peppers.—Set out your pepper plants.

Pot and Medicinal Herbs.—Most of these may still be set out; they must, however, be kept moist until they take root thoroughly; nor must the watering pot be afterwards spared in dry weather.

Gathering Herbs.—Herbs should be cut when they come into bloom, and be dried in the shade.

Strawberries.—Occasionally watering the strawberries, while bearing, will increase the size of the fruit. The nozzle of the watering pot must be held well down to the ground, so as not to wash off the farina from the flowers.

Strawberry Beds may be set out this month; but the utmost care must be observed in watering the plants every day, or every second day at farthest. This practice must be strictly followed in all seasons of drought. Plants set out this month and thus cared for will root more strongly than those planted out in autumn, and bear more abundantly next season.

Peach Trees.—Examine the roots of your trees for worms, kill them with the point of your knife or knitting needle, replacing the earth and sow a mixture comprised of 5 parts *ashes*, 2 parts *salt*, and 1 of *salt-petre* around the trunk and beneath the limbs of the trees, giving to each tree about a gallon of the mixture; that done, paint the body up as far as the lower limbs of the trees, with a mixture made in the proportion of 1 gallon of soft soap, 1 quart of salt, and 1 lb. of flour of sulphur. If you have not done so before paint the bodies of your apple and pear trees as recommended for peach trees.

Weeding generally.—Keep all the beds and plants in your garden clean of weeds and grass. Give daily *personal supervision* of your garden, give your orders and see that they are carried out; vigilance and exactness will be sure to ensure obedience.

FLORICULTURE.

WORK FOR JUNE.

Prepared for the American Farmer by S. Feast, Florist.

Dahlias should now be planted out: continue to plant until the 20th of the month. A succession of flowers will thus be obtained. Tie the plants to stakes as they advance in growth.

Camellias may be removed to the open air, the latter part of this month, and placed in a half shady situation; water carefully, and syringe frequently.

Geraniums, when done flowering, should be removed to the open air, in order to harden their wood for cuttings next month.

Annuals, sown in frames or boxes, (particularly the tender varieties) should be transplanted to the border. Continue to sow Pansies, Candy tufts, Larkspurs, Mignonette, &c., for a succession.

Hardy Perrennial Flower Seed, if sown this month, will flower next spring.

Verbenas should be planted out at once in the border.

Roses, Salvias, Alonsoas, &c., which have been kept in the house, may be turned out into the border.

Scarlet Geraniums, if planted out in the border, will give an abundance of bloom during the whole summer.

Calceolarias and *Fuchias*, in bloom, should be shaded and carefully watered.

Greenhouse Plants, of all kinds, should be removed to a favorable situation, in the open air, where they will be shaded from the sun, except morning and evening.

REVIEW OF THE TOBACCO AND GRAIN MARKET.

Reported for the Farmer by J. W. & E. Reynolds.

BALTIMORE, June 1, 1849.

Since our last monthly report we have nothing of any consequence to state as having occurred in regard to either the price of grain or tobacco; the market for the first, has been through its usual fluctuations of a few cents per bushel upon the arrival of every steamer, which occurs at this season of the year, *weekly*, and sometimes oftener, whilst the *Tobacco* market has sustained itself very well, considering the large receipts and the inferior quality of a large portion of what has been received, the purchasers rejecting almost entirely the common sorts, there being already large stocks of the inferior sorts on hand, both in this country and Europe, but we indulge a hope that the scarcity of Kentucky tobacco may yet operate favorably upon our market for this description. We are sorry to say that the crop now coming in is not as good as it was at first anticipated, though it may not be called, by any means, an inferior crop.

We quote common dark crop and second tobacco, at 2 to $3; good crop 3½ to $4½; good and fine reds 5 to $9, but very little at the last named figure, except it is suitable for wrappery, which is worth from 8 to $15, as per quality.

Wheat, common red 95c. to $1; good red 1.05 to $1.07, white for fam. flour, $1.14. Rye, 55c. Oats 26 to 30c. Yellow Corn 55 to 56c.; white 48 to 50c.

Guano.—We quote selling prices in second hands: Peruvian $45 per ton of 200 lbs.—Patagonian $35—African $35—Chilian $30. Three cargoes have recently arrived, two with Patagonian, and the other with Peruvian Guano. We learn that one cargo of former importation, is still in the market—many of the vessels that have sailed for California are expected to return loaded with Guano, but it is probable that few of them will reach here in time for the fall's use.

No. 1 Potashes 5½c. per lb.; No. 2 do 5; Nitrate Soda 3½; Muriate Ammonia 12a13; Sulphate Ammonia 10c.

Herrings, 3.87a4.25—Rye, Pa. 60a61c., Md. 55—Flaxseed, 120c.—Molasses, N. O. 18a27; P. Rico 22a26; Cuba 17a22—Plaster $2.37 per ton; ground $1.12 per bbl—Rice 3.25a3.50 per 100 lbs.—Sugar, N. O. $3.75a5; P. R. 4a5.50; Cuba 4a4.26—Whiskey in bbls. 21½.

Baltimore Cattle Market, May 28.—The market today was rather inactive. The offerings reached 450

head, of which 385 were sold to city butchers, and 65 were left over unsold. Prices ranged from $3 to $4.75 on the hoof, equal to $6a$9.25 net, and averaging $4.12½ gross.

Hogs.—The market was dull, and prices have slightly declined. We quote from $4 to $4.75.

Philadelphia Cattle Market, May 24.—The offerings for the week were 1100 Beef Cattle, including 330 head driven to N. Y. Beeves sold pretty freely at $6.75a8.50 the 100 lbs., and 80 left over.

METEOROLOGICAL TABLE,

From the 21st of April to the 21st of May.

Kept at Schellman Hall, near Sykesville, Carroll County, Md.

Taken at 6 o'clock, a. m., 2 o'clock, noon, and at 6 o'clock.

	Wind.			Temperature			Remarks.
21	w	w	nw	31	56	54	Clear
22	w	w	w	45	60	58	Shower Clear
23	w	sw	s	50	69	66	Clear
24	w	w	w	56	67	60	Rain Clear
25	w	sw	sw	47	57	55	Cloudy Rain
26	e	w	w	53	61	57	Rain ¼ inch Cloudy
27	se	se	e	47	57	57	Cloudy,
28	s	w	w	45	60	59	Fog, cloudy, rain 1-10th inch
29	w	w	w	53	63	58	Clear
30	nw	s	s	41	65	63	Clear
1	s	s	s	52	73	63	Clear Bee Martins arrive
2	nw	w	sw	49	65	60	Clear Balt. bird and wren "
3	nw	se	s	46	67	60	Cloudy Clear
4	sw	sw	s	50	83	76	Clear
5	s	e	ne	65	63	50	Fog " Gust 1 in. rain
6	e	e	ne	44	44	44	Rain 1 inch
7	ne	se	se	41	54	49	Rain ¼ in. Cloudy
8	e	se	s	48	54	55	Fine rain Cloudy
9	w	w	w	52	70	65	Clear
10	ne	se	sw	49	63	57	Cloudy
11	w	ne	w	49	64	60	Clear
12	n	se	sw	43	67	61	Clear
13	w	nw	sw	52	62	59	Showery, rain 1¼ in., clear
14	w	w	w	49	60	56	Cloudy
15	w	w	w	49	68	63	Clear
16	w	w	se	49	70	63	Clear
17	w	s	s	55	66	60	Clear
18	s	sw	w	55	70	66	Clear
19	w	w	w	47	72	76	Clear
20	w	w	sw	51	74	70	Clear

"CHAPPELL'S FERTILIZER" vs. "PROFESSOR DUCATEL" AND OTHERS.

ON page 406, present number of the American Farmer, will be found some strictures on the Analysis of Dr. Higgins, "State Agricultural Chemist," (which appeared in the May number, page 365,) in which, we think we have fully exposed the fallaciousness of said analysis, and the erroneous inferences drawn therefrom. We hope, also, that we have succeeded in removing any unfavorable impressions, which the communication of Dr. Higgins was calculated to produce.

There appears, also, on page 377, an advertisement, which has appended to it, *an analysis* of Dr. Ducatel, which is presented as evidence of the *fertilizing properties* of the advertisers' article.

We call the special attention of our friends to said analysis and the remarks *introducing it* to the notice of agriculturists. Now, this analysis, having *been used to our disadvantage*, by comparing *it* with the analysis of Dr. Higgins, it has become *our duty* to expose the fallaciousness of this analysis, as we have done that of Dr. Higgins, and we thereby show the necessity of the "*caution*" heretofore published by us.

Before we proceed to *analyse* the *analysis* of Dr. Ducatel, we would premise, that we deeply regret the sudden death of this gentleman, and should greatly have preferred to make the remarks we find to be necessary in our own defence, had he been still living; nevertheless, his analysis having been published, and used for the purposes before mentioned, we cannot do otherwise than expose its fallacy also.

It is *very singular*, and "*passing strange*" that any *Chemist*, who professes to make a Compound, the constituents of which it is presumed he knows before they are put together, should resort to *another* Chemist to analyse the same, and then use that analysis to show what are the component parts of said compound. Could he not have made known these facts, if necessary to be known, without resorting to such aid?

We regret the necessity we have for these remarks and this exposure, but self-protection, and to prevent any undue advantage being taken to our disadvantage, by the improper use of the analysis above referred to, is our apology for appearing thus before the public. It is *very important* that farmers be on their guard, they should read the judicious remarks of the Editor, as found on page 357, 3d vol. American Farmer.

We were the FIRST to combine materials for fertilizing purposes, claiming to possess *all* the inorganic, and some of the organic constituents necessary for the increased product of the soil. It was put at a low price, that it might come within the means of every farmer disposed to try its efficacy—at a time too, (1847,) that Guano was very scarce, and consequently high in price. By our chemical research, we were enabled to make available several materials,—the residue of the Chemical Laboratory, not before used for agricultural purposes, and had been in the business over a year and a half, and by numerous experiments fully satisfied ourselves and others that the article *did possess* powerful fertilizing properties, and after having the character of the article fairly established, two or three individuals influenced solely by the prospect of gain, without either chemical or agricultural science, determined to get up an *opposition*, (and established *their office directly under ours*, though *one* of *the proprietors has a store at the corner*, one street below, equally eligible for their business. In the absence of all *proof* of their article possessing fertilizing powers, and not willing to *wait*, as we had done, until those properties had been fully established by successful experiments, (as we did not even advertise our "Fertilizer" for general use until fully satisfied by actual experiment that the principles in vegetable physiology, which had led us to its manufacture had been fully confirmed,) they resort, in order to aid them in getting up a demand *at once* for their article to Dr. Ducatel, who furnishes them, not only with an analysis, but certain inferences drawn thereform, in the form of a *Recommendation*, in which reference is made to our article, though he knew nothing about *it*. Under these circumstances, and many others of a like character, we consider ourselves perfectly justifiable in taking *this step*.

If certificates of this kind are to be depended on, the time will very soon come when the country will be full of "*Nostrums*" for the renovation of worn-out land.

The following statements will show the utter *impossibility* of the correctness of Dr. Ducatel's Analysis and certificate.

He says that 100 lbs. of the article submitted to and analysed by him, contain of

Bi Phosphate of Lime	60 lbs.,	(or in a barrel of 300 lbs.)	180 lbs.
Potash, . .	10 lbs.,	. .	30 lbs.
Nitrate Soda, .	10 lbs.,	. .	30 lbs

Sulphate Ammonia,	5 lbs.,	. .	15 lbs.
Animal Matter, .	15 lbs.,	. .	45 lbs.
	100 lbs.		300 lbs.

These articles if sold separately for *cash*, would bring readily, the prices we have affixed to each:

*180 lbs. Bi Phosphate of Lime,	2c. .	$3 60
30 lbs. Potash, . .	5½c. .	1.65
30 lbs. Nitrate Soda, .	3½c. .	1 05
15 lbs. Sulp. Ammonia, .	10c. .	1.50
Barrels, and cost of manipulation, . .		40
		$8.20

It is hardly to be supposed that any person would be disposed to combine certain materials and sell them for $3 per barrel, which could be disposed of readily, if sold *separately* for $8.20; such an idea is preposterous—we would infer from this statement *alone* that the analysis is not to be depended on, and any inferences deduced from such a *display* of materials entering into said compound must of necessity be fallacious.

There are other facts, however, but two of which we will mention before taking leave of the "*Analysis*" and "*Renovator*," and which will show most conclusively that no confidence is to be placed in this "Certificate."

1st. At the very time this analysis was made, the parties procuring it were using a combination of Magnesia, secured to us in our letters patent, (of *which*, we have a proper acknowledgment in writing.) which *substance* is not mentioned in Dr. Ducatel's Analysis as forming a portion of said compound.

2dly. It is stated that the compound contained 60 parts Bi Phosphate of Lime, and 10 parts Potash.—The two are incompatable, and cannot exist together, for, it is a well known *fact*, that by the addition of a free Alkali to Bi Phosphate of Lime, a reaction is produced by the affinity exerted by the Alkali for the equivalent of Phosphoric Acid, previously existing as a Bi Phosphate with formation of an Alkaline Phosphate.

Were it necessary, we would *analyse* the *analysis* still further, but we presume enough has been stated to convince any one that it is impossible for a compound to exist either in the form or proportions as stated in the analysis.

We will close our present remarks by a quotation from a work on "Practical Agriculture," by William Partridge, of New York, page 19 (himself a Chemist): "*There are hundreds of analyzers scattered through the country, who will work very cheap, but their results cannot be confided in, and must necessarily lead the farmer into expensive and injurious operations.*"

P. S. CHAPPELL,
WM. H. CHAPPELL.

Baltimore, June 1st, 1849. jun 1–t

*In estimating the cost of the Bi Phosphate of Lime, we have taken only 180 lbs. Bone Dust, at 1c. $1.80
And 90 lbs. Oil of Vitriol, necessary to convert the Sub. Phosphate into a Bi Phosphate, at 2c. 1.80
$3.60

Strictly speaking, the cost would very much exceed this, but the rate allowed in the statement answers our present purpose.

BULL FOR SALE.—A pure DEVON BULL, between the age of 5 and 6 years. Farmers wishing to obtain the pure bred, will find this a good opportunity. Apply to E. WHITMAN, Jr., Agricultural Warehouse, corner of Light and Pratt-streets. jun 1

"CHAPPELL'S FERTILIZER."

THE increasing demand for our *Agricultural Salts*, has made it necessary for us to make more extensive arrangements for its manufacture. By improved manipulation, we are enabled to prepare the article *better than ever*.

We have daily the most satisfactory reports from that sold last fall, for the Wheat and Clover crops. We are now prepared to furnish orders promptly.

Price $20 per ton, put up in barrels 300 lbs. each. Terms, Cash, or approved acceptances for sums over $50.

P. S. CHAPPELL, }
WM. H. CHAPPELL, } Patentees,

Office Up Stairs, Corner of Hanover and Lombard Streets, Baltimore.

☞ In sending orders to the city for the purchase of our article, be particular to have none but "Chappell's Fertilizer." The name is stencilled on every barrel. jun 1

OIL OF VITRIOL.

500 CARBOYS OF OIL OF VITRIOL, for sale by the undersigned.

Farmers desiring Oil of Vitriol or Sulphuric Acid for dissolving bones will be furnished with ample directions for its use. P. S. CHAPPELL,
Manufacturing Chemist, Office *Up Stairs*,
jun 1 Cor. of Hanover & Lombard-sts., Balto.

BONE DUST.

THE subscribers manufacture BONE DUST, as fine as any made in the country, by grinding, and without any chemical operation—their bones are fresh from city slaughtered cattle, and all the valuable properties are contained in them. They sell at the lowest market price. Orders will be received at our factory, Columbia-street, intersection of the Washington road, or at the store of Geo. C. Collins & Denson, 83 Light-street Wharf.

GEO. C. COLLINS & BULLOCK.

N. B.—Always on hand, Glue, Curled Hair and Glue Manure. jun 1–4t*.

Chappell's Fertilizer for Tobacco.

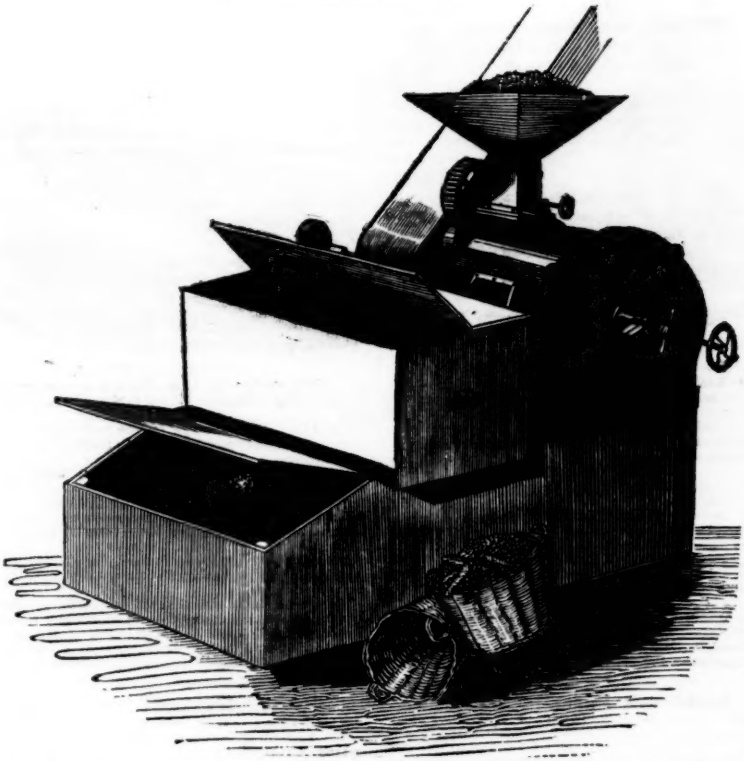
THIS article will greatly promote the growth of Tobacco, as well as other vegetable products. In our printed directions, under the head of Tobacco, it will be seen, that we recommend with its use a few bushels unleached Ashes, as that crop draws largely of Potash from the soil; the idea taken therefrom, has led to an advertisement of an article for "Tobacco Growers." Should any of our friends desire it, we will add an extra quantity of Potash to the amount of one dollar for each barrel. The cost with extra Potash will be $4 per barrel, and as prepared for all other crops $20 per ton of 2000 lbs. in barrels of 300 lbs. each. P. S. CHAPPELL,
(Office up stairs,) Corner Hanover & Lombard-street.
Baltimore, June 1st, 1849. jun 1

FOR SALE.—A Farm of 165 acres of prime land, near Franklin Village, 5½ miles from the city. The improvements are a comfortable dwelling of 7 rooms, (surrounded by a grove of forest trees,) a dairy, barn, and all other out-buildings in good order; an apple and peach orchard of choice fruit near the house. The garden has a southern exposure, and contains a variety of fruit and shrubbery. There are about 60 acres of woodland, the whole farm being under good fencing. The situation remarkably healthy and in a good neighborhood. It is well adapted either for a dairy farm or for general farming purposes, and can be divided into two farms of 120 and 45 acres each. For terms, apply at this office. jun 1

A. G. MOTT,
MANUFACTURER OF
PLOWS, HARROWS, CULTIVATORS, GRAIN CRADLES, WHEAT FANS, CORN SHELLERS, CYLINDRICAL STRAW CUTTERS, &c. &c.

☞ Plow Castings, of the New York composition chilled metal, always on hand, and old implements repaired, at No. 8 ENSOR STREET, adjoining the Bel-air Market, Baltimore.
Jan1

PAGE'S NEW AND IMPROVED GRIST MILL.



THE above cut represents my Grist Mill, which was exhibited at the Fair of the Maryland Institute, held last Fall, where it received a Premium, and also at the Cattle Show. This Mill is simple in its construction, not liable to get out of order, and easily repaired. With a power of 2 horses, they will grind 4 bushels of beautitul Wheat Flour or Corn Meal in an hour. Price, with French Burr Stone, 22 inches diameter, $125; with screens, sifters and boxes for wheat flour and corn meal, complete $160. This Mill has a patent self-feeder, the advantage of which is to feed the stone according to the speed applied. The advantage of such a convenience on a large estate, or in a neighborhood where there may be no custom work Mills, need not be dwelt upon, it being too obvious to every mind.

GEO. PAGE, Baltimore.

My Patent Saw Mill, noticed in the last Farmer, received a premium at the last Fair in this city.—The following testimonial in regard to it will show the estimation in which my mills are held by those who have used them.

Extract of a letter to the Patentee, dated

"WASHINGTON, Hempstead Co., Ark., April 14, 1849.

"I have delayed writing you since I received my Saw and Grist Mill until I could see it in practical operation. I can now say to you that it is working as well as I could expect it. I did have some difficulty in the first place, owing to the miscalculation of the engineer, who put it in operation, by making the drum wheel too large for my engine; it is now working a 10 foot drum, and cuts splendidly, which I am happy to inform you of. It is a perfect curiosity to hundreds of persons in this section of country, who have never seen anything of the kind; and the introduction of it here will no doubt be the cause of your receiving orders for a number from this vicinity. jun 1 WM. MOSS."

GUANO.

PERUVIAN, PATAGONIAN, and other varieties, warranted genuine, and of the latest importations—for sale on accommodating terms, by S. FENBY & BRO.
cor. Gay and Pratt-sts.

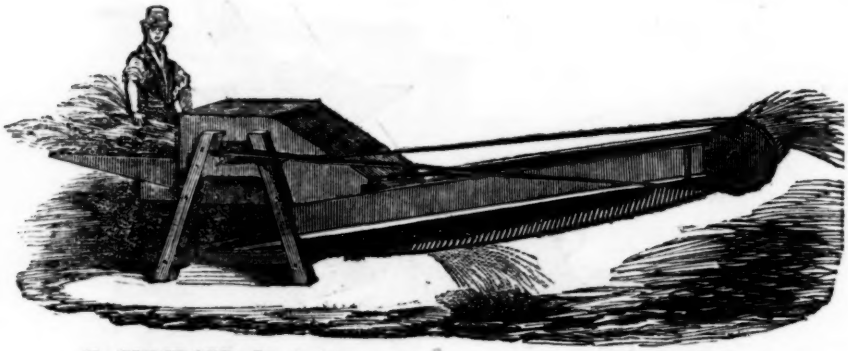
Also, Ground Plaster in bbls. my 1

Guano! Guano! Guano!

PERUVIAN GUANO, Amaises cargo, in cotton bags—Patagonian Guano, African do. Chilian do., for sale in lots to suit purchasers, by T. W. & L. LEVERING,
No. 114 Pratt-st. Wharf.

Also, Clover Seed, Timothy Seed, Orchard Grass, Herds' Grass, &c.

CULTIVATING AND HARVEST TOOLS, AGRICULTURAL MACHINERY, &c.



R. SINCLAIR, Jr. & Co.

62 *LIGHT STREET, near Pratt Street,*

ARE now manufacturing a large and superior assortment of Cultivating Implements, Thrashing Machinery, Grain Cradles, &c., which they offer for sale on reasonable terms. The following have undergone considerable improvement since last season, viz:

GRAIN CRADLES,

Made with Iron and Wood Braces, elastic fingers, and warranted Scythes.

CULTIVATORS,

Stationary and Expanding Corn and Tobacco; made with Cast and Steel Tines, also right and left and double pointed Tines.

CULTIVATING PLOWS,

Made with one, two and three Mould Boards—the two latter are admirably adapted for Cultivating Corn, Seeding Wheat, &c.

RAKES.

Revolving Horse, for raking hay and grain—a great labor-saving machine—no farmer should be without one.

Hand Rakes, made with 2 and 3 bows, com. split, &c.

Steel and Wooden Forks, Scythe Rifles and Stones.

FANNING MILLS,

Four sizes, made with the improved double-screws; chaff with great rapidity, and clean Wheat perfectly from Cockle, Cheat, &c.

HORSE POWERS,

Lever Horse Powers, made on the most approved plan, and warranted equally perfect to any in this country—of these are made 4 sizes.

Railway or Endless Chain, for 1 and 2 horses—made extra strong and simple.

THRASHING MACHINES,

4 sizes, made on the spike, open cylinder principle, and the most effectual and best Machines of the kind now in use.

ALSO,

Plows of every kind, *Straw Cutters, Corn Shellers, Corn Mills, Corn and Cob Crushers & Grinders, Corn and Wheat Drilling Machines, &c. &c.*

For particulars, see *Descriptive Catalogue*, (to be had as above,) containing description of Machinery for sale, prices, list of garden and field seeds, trees and plants; also directions for planting and sowing seeds, quantity sown per acre, and much other information interesting to the farmer. jun 1

Rushbrook Farm for Sale.

SITUATED Three Miles north-east of Towsontown, containing 450 acres, more or less; from 175 to 200 acres in cultivation. It is estimated that there are from 4 to 5000 cords of wood, consisting to a very great extent in chestnut rail timber—all the fields in cultivation have been heavily limed, the most of them at 100 bushels per acre. The above farm is newly and thoroughly fenced. The other improvements are, three new and excellent good sized log houses, and one extra size; also one extensive manager's house, having some 8 or 10 rooms; barn (called the three decker) 60 by 45 feet, just new, and having cost $1500, and built in the best manner; corn, hen and other houses; smith shop, and kiln capable of burning 1500 bushels. This farm is undulating; land very kind and susceptible of very high improvement. There is a fine young peach orchard. For terms and other particulars, apply to

SAMUEL SANDS,
jun 1 Office American Farmer.

CULTIVATORS.

WHITMAN'S CULTIVATORS took the first premium at the State, and also at the County Fairs, and are sold as follows, viz: $4.50, $5, $5.50 and $6.50.

E. WHITMAN, Jr.,
Agricultural Warehouse and Seed Store,
my1 Cor. of Light and Pratt st., Baltimore.

SCYTHES, Grain Cradles, Horse Rakes, Hand Rakes, Pitch Forks, and all kinds of Harvest Tools, Wholesale and Retail.

E. WHITMAN, JR.
Agricultural Warehouse and Seed Store,
Corner of Light and Pratt st., Baltimore.

PLOUGHS.

PROUTY & MEARS', Ruggles, Nourse & Mason's, Minor & Horton's, Chenoweth's, Davis', Woodcock's, Sinclair & Moore's, New York Ploughs, &c. &c., for sale by

E. WHITMAN, Jr.,
Agricultural Warehouse and Seed Store,
my1 Cor. of Light and Pratt st., Baltimore.

Agricultural Machinery.

THE subscribers are now having put up, as fast as the extent of their shops will admit, *Threshing Machines*, which Thresh, Clean and Screen the Wheat complete at one operation; such as we received the First Premium for, at the great Exhibition at Baltimore, last November. They will get out from 20 to 35 bushels per hour. Also, TREAD POWERS, for one, two or three horses, of the most approved kind, and LEVER POWERS, of different sizes, all of improved construction. We will state some of the improvements, to show that they consist not in declaration, but in fact. First, we have got up patterns specially to embrace the improvement so justly and strongly recommended by a Committee at the Agricultural Exhibition at Baltimore, last November, which improvement consists in giving a motion by the Power, so that the pulley on the threshing cylinder can be greatly increased, so as to secure regularity in the motion of the cylinder by not allowing the strap to slip, as it certainly will not do over a large pulley. Ours will require the pulley to be double the size of those now in use. Another improvement in our Power is, that the pitch of the cogs, in all of the wheels, are much closer than common, having also increased width, to secure strength. Machinists of experience will universally agree that this fine pitch gearing will give greater ease of draft, as well as smoother motion. ☞When ordered, we make Threshers with or without shakers. PRICES AT SHOP:

Tread Power, 1 horse, $85; 2 horse, $100; 3 horse, $110.
Lever Power, large size, $75; small size, $65.
Our Premium Thresher and Cleaner, $100.
Common Threshers, according to size, from $35 to $50.

☞We will deliver them in Baltimore, or an equal distance, for a small additional charge.

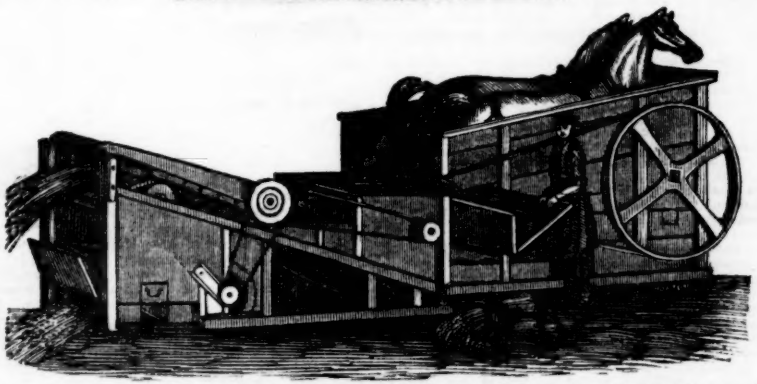
☞Our work of every description we guarantee to work well, and ask only a trial to secure the approbation and patronage of the public. ATLEE & BLYTHE,

New Windsor, Carroll county, Md., May 4, 1849.

P. S.—The subscriber, one of the firm, being a practical farmer, assures the public that these machines are, upon trial, exactly what their advertisement represents.

jun 1 JAS. C. ATLEE.

250 THRESHING MACHINES FOR SALE THIS SEASON, BY E. WHITMAN, Jr.



THE above cut represents *Whitman's Premium Wrought Iron Rail-way Horse Power & Thresher.*

We also have several kinds of Sweep Powers, among which is one known in some parts of the country, as the Fitz, Kirkpatrick and Hanover Power.

The cylinder of our Thresher will last 100 years in constant use, and the horse-power cannot be broken, with proper care. As evidence that our machines are fast gaining popularity, manufacturers who have been most opposed to them, finding they will supersede all others, are now even trying to imitate them, but those who have listened to their bitter opposition for the last five years, having been once deceived by these manufacturers, will hardly entertain any confidence in the recommendation of the spurious article now offered by them. And for the benefit of farmers we will say that *our* Machines can only be had by applying direct to

E. WHITMAN, Jr.,
Agricultural Warehouse, Cor. Light & Pratt-sts.,
jun 1 Baltimore, Md.

MC CORMICK'S REAPING MACHINE for sale by
jun 1 E. WHITMAN, Jr.

BLOODED STOCK FOR SALE.—4 Ayrshire Heifers, and 2 Bulls, by an imported bull, out of superior full bred cows—are of different ages from 1 month to 15 months old, and at prices from $30 to $80.

3 Devon Bulls, 6 to 12 months old, from $35 to $50 each.

3-4 Chester, 1-4 Berkshire Pigs, an excellent cross, $10 per pair. A pair of Teppo Chickens, a large breed of fowls. Apply at this office. jun 1

BONE-DUST AND POUDRETTE ESTABLISHMENT.

On Harris' Creek, at Canton, Baltimore.

THOMAS BANES, continues the manufacture of *POUDRETTE*, and is prepared to supply any orders for the same—The article manufactured by him, will be found probably more valuable than any made in the Eastern cities. His *BONE-DUST* weighs from 55 to 60 lbs. to the bushel, and is as fine as any article sold in this market. Price of Bone Dust, 55 cents per bushel. Poudrette, $1.20 per barrel. Persons sending their carts or wagons to the factory, can obtain the Poudrette at 20 cents per bushel.

☞Any orders left at the factory, or with Mr. S. SANDS, editor of the "*Farmer*," at the State Agricultural Society's Rooms, will receive immediate attention. Terms, cash.
my 1–tf.

GUANO! GUANO!!

PERUVIAN GUANO, Government importation, handsomely bagged in white cotton bags. Patagonian Guano, selected by persons left on the coast for that purpose, very dry and strong, and in fine order for sowing; in bags or barrels. Saldana Bay Guano, in casks barrels, or bags.

Ground Bones, Clover and Timothy Seed, for sale at the very lowest rates, by W. WHITELOCK,
Cor. Cay and High streets.

Clubs and dealers will be furnished with Guano on favorable terms. my 1–2t.

JOHN FEAST,

FLORIST AND SEEDSMAN,

OFFERS for sale at his only establishment in the city, *Corner of Pine and Lexington Streets*, a fresh supply of Garden Seeds, per ship Harvest from Liverpool, in fine order, and warranted, with everything in his line of business, low for Cash, as Trees, Shrubs, Greenhouse Plants, &c. All orders punctually attended to, and safely packed.

HAYSTACK FARM FOR SALE.—I wish to sell my Farm, in the Long Green Valley, Baltimore county. It is about 15 miles from the city of Baltimore, on the Harford Turnpike Road, and adjoins the lands of J. M. Duckett, Jesse Garrett, Thomas E. Gittings and others. This Farm contains between 400 and 424 acres, of which about 180 are under cultivation, 200 in the valley, underlaid by White Limestone of superior quality, and 80 in the Ridge, recently cleared, and improved by Clover and Plaster.

The balance is woodland well covered, the growth being mainly white and black Oak, Chestnut and Hickory, all lying well for cultivation. This Farm is admirably watered, being divided into fields of 20 to 30 acres, and having running water in every field.

50 acres are well set in timothy grass in the valley, 45 in clover; the rest under grain crops; of the ridge land nearly 50 acres are in clover, well set, the balance in course of cultivation for summer crops.

The buildings are good and conveniently situated, the Dwelling of stone and wood, rough cast, containing 12 rooms in good repair. Barn 60 feet by 40, with Stabling underneath for 26 head of Cattle. Corn House, new, and holding 400 barrels of corn, Stone Quarter, Overseer's House, and other out buildings, all insured in the Harford Co's. office, at three-fourths value, for $3,900. An excellent Lime Kiln conveniently situated, burning 1000 bushels. A Lawn of 4 acres around the House, beautifully set in green grass.

There are two Orchards on the Farm, one of Cider Apples, one of Pippins. One of the fields contains a bed of Iron ore, believed to be of excellent quality, 4½ miles from the Furnace of R. Howard & Co. on Gunpowder Falls.

This Farm has long had the reputation of being one of the most valuable Farms in the county, and has been for 14 years past under an improving system. The fences and ditches are in excellent condition, and the soil, naturally of great fertility, has been highly improved by lime and barn-yard manure, deep and thorough cultivation, and under draining.

The valley part is peculiarly adapted to grazing, producing green grass spontaneously and rapidly. Limestone sells readily at the quarries for 5 to 6 cents per bushel, and Lime at 15 cents at the kiln, great demand for both. The neighborhood is good and perfectly healthy.

The farm is susceptible of division, and will be divided to suit purchasers. The terms of sale will be accommodating and possession given by the 1st of September. For further information address the subscriber, at Fork Meeting House Post Office, Baltimore county. my1 WILSON M. CARY.

BOOK & JOB PRINTING NEATLY EXECUTED

IMPORTANT TO TOBACCO PLANTERS.

THE undersigned most respectfully call the attention of Tobacco Planters to their Chemical preparation for the improvement of the growth and quality of this plant. Their preparation will be known as "Kettlewell & Davison's Tobacco Generator," and is manufactured expressly for the object indicated—the utmost care and investigation having been made to secure all the inorganic elements necessary to its growth and quality. Its effect upon poor and impoverished lands will require the test of experience to make it justly appreciated. The undersigned honestly believe that this compound will prove of vast importance to the Tobacco interests of the State; but prefer reserving any further expression of their opinion of its qualities, sincerely hoping, that sufficient enterprise will not be wanting to give it a fair trial, no difference how small the experiment.

The material of which the "Generator" is composed is alike scarce and expensive, therefore those who desire to make the experiment will do well to apply early. It is put up in barrels of 300 lbs. each, and should be applied upon the surface of the ground, in quantities from two to four spoonfuls upon each hill, according to the quality and condition of the soil. Price $30 per ton, or $5 per bbl. KETTLEWELL & DAVISON,

Factory, Hamburg-street, Federal Hill. Office at Ober & Mc Conkey's, Wholesale Drug Store, N. E. cor. of Lombard and Hanover streets.

The subscribers also avail themselves of this opportunity to inform the Farmers and Planters of this State, and elsewhere, that they have established, under the firm of Kettlewell & Davison, an "Agricultural Depot," in Baltimore, for the manufacture of CHEMICAL MANURES adapted to all descriptions of grain, grass and tobacco. They will, in due season for the fall crops, present to the public (sustained by certificates of the ablest chemists and the most practical and accomplished farmers) their "Agricultural Renovator," a chemical manure for the rapid and permanent improvement of land, which experience will show to be inferior to none now attracting the attention of agriculturists. Orders for the Agricultural Renovator, for the corn or oats crop, will receive prompt attention.

Price, $20 per ton, in bbls. of 300 lbs. each.

JOHN KETTLEWELL,
WILLIAM DAVISON, Chemist.

When the undersigned wrote their advertisements of Chemical Manure, they had not intended to present any testimony of its quality, at this time; but, upon reflection, and feeling the importance of getting their Agricultural Renovator into notice at an early day, they have determined to place before the public the following communication and analysis, made by the late lamented and distinguished Professor Ducatel, in whose sudden death the science, as well as the agricultural interests of Maryland, have met with no ordinary loss. A name so well known as the late State Geologist, for high capacity and unblemished purity of character, will, it is believed, satisfy the public that, in the purchase of their article, all cautions of impositions, if directed against them, would be alike futile and impotent. The original communication of Professor Ducatel is left at the Maryland State Agricultural Society's Hall. KETTLEWELL & DAVISON.

BALTIMORE, April the 7th, 1849.

Mr. *John Kettlewell*—Dear Sir: After witnessing the process through which you carry on the operations in the manufacture of your *Fertilizing Salts*, and being perfectly satisfied that you were proceeding artistically in the matter, I have, at your further request, submitted to analysis the result of the various mixtures growing out therefrom, and I have to report as follow:

COMPOSITION—Bi-phosphate of Lime	- - - -	60
Potassa	- - - - - - -	10
Nitrate of Soda	- - - - - -	10
Sulphate of Ammonia	- - - -	5
Animal Matter	- - - - - -	15
		100

It is evident, from the consideration of the constituents of the mixtures, as represented above, that it cannot fail to be of infinite benefit to almost all kinds of soil. I would have no hesitation in recommending it to our farmers, without any other restriction, at first, than moderate application, by way of experiment. Of course, not having any *experience* myself of its actual efficacy, I feel bound to express the latter restriction, without, however, entertaining much doubt as to the final result.

I may add, that in consideration of the proportion of *animal matter* which the mixture contains, there is reason to believe that a large proportion of *Ammonia* will be evolved, which, besides enhancing the value, will render it more permanent. Further, I have no hesitation in saying that your compound of "*Chemical Salts*" is at least equal, if not superior, always with the proviso of being judiciously applied, to any other that I have had occasion to examine so far, without excepting the now well known article called *Peruvian Guano*.

my1 Very truly, yours, &c. J. T. DUCATEL, Chemist.

PLOUGHS! PLOUGHS!!

The subscriber is manufacturing Ploughs of various patterns and of different sizes; also Wheat Fans, Cylindrical Straw Cutters, Corn and Tobacco Cultivators, CORN SHELLERS, &c. Also, THRESHING MACHINES and HORSE POWERS—these latter are used by the following gentlemen, to whom reference is made, as to their superior value, viz: Messrs. T. Beard, Th. Beard, Dr. Watkins, J. T. Hodges, T. Welsh, W. Mackall, J. Inglehart, A. Sellman, R. Sellman, W. Hopkins, J. Kent, Geo. Wells, Geo. Gale, Dr. Fenwick, A. Franklin, J. C. Weems, of Anne Arundel county; G. W. Weems, J. T. Barber, R. B. Chew, W. Boswell, Y. Howes, of Calvert co., Md. Agent of Evans Davis, Baltimore co. for sale of the woodcock Plow. Pennsylvania Grain Cradles. CHAS. H. DRURY.

Gillingham Alley, entrance from Howard-st., near Pratt, mal and store, Hollingsworth-st. corner Pratt.

J. S. EASTMAN has a few Horse Powers and Threshing Machines for sale very low, to close out his old stock. He also continues to furnish Castings for Plows and Machines made and sold by him—and to furnish his Southern friends with all the Irons for Ploughs ready for stocking. He would also attend to such agency business as does not require storeage room. Counting Room 180 Pratt-street, (his old stand,) entrance by passage, through the front store.

N. B.—On hand 2 of his superior 13 inch Iron Frame Straw Cutters, and also 2 of his 20 do. jun 1 J. S. E.

CHEMICAL MANURE,

Manufactured by the "George Bommer New York Manure Company."

THIS Manure is made chiefly of Fecal matter from the sinks, in which is mixed a small portion of substances that are of themselves powerful agents of vegetation, and possess the virtue to fix and retain the ammoniacal gas of the matter.

The great desideratum of the agriculturist has always been, to find out some process by which excrements might be solidified quickly, and all their fertilizing properties so strongly retained, that the manure may dissolve slowly in proportion to the requirements of the plants, and therefore, produce its effects for a time equal to that of farm manure.—This process was at length discovered by the French Chemists, and is now practically carried out with complete success in more than sixty of the large cities in France, where such factories are in full operation.

The "G. B. N. Y. M. Co." has established a Factory, on an extensive scale, near the city of New York, in which they manufacture this kind of manure, and as the fecal matter can be obtained in this country at less expense than in France, the manure will not only be made stronger, but will be sold at a price less than in the French cities, this price being so established as to afford only the reasonable remuneration to which we are honestly entitled, the more so, as its manufacture is not of the most agreeable kind, and withal troublesome and laborious.

The manufacturing department is under the special charge of George Bommer, esq., who has a perfect scientific and practical knowledge of manure matters generally, and the company has established a standard for the strength of its manure from which it is intended not to deviate, so that its customers may at all times be furnished with an article really worth what they pay for it. Our manure is an inodorous grain, and as the substances from which it is made contain of themselves all the elements necessary to the fertilization of the soil and growth of plants, it is extremely well adapted to such purposes.

To manure an acre highly, it requires 12 to 15 barrels or 36 to 45 bushels spread broadcast. Applied in hills, one half of this quantity will suffice. Its application is simple and easy, and printed in-

structions for its use will accompany every parcel sent to order.

We desire it to be remembered, that our manure has no similarity to another, known under the name of "Poudrette," although the principal componen of ours (the Fecal matter) is the same as that which is used in poudrette in a much less proportion; our auxiliary substances, as well as our manufacturing process, are altogether of a different nature and kind.

It belongs not to us to eulogize further the quality of our manure, what we desire at present is, to call upon the members of the agricultural community to try it! and we have reasons to assure them, that they will find it the most profitable manure they ever used.

Price, taken at the Factory:

37½ cents per bushel, without package; 50 cents per bushel, packed in barrels; or, $1.50 per barrel, package included.

Orders addressed to the above company at this office, 72 Greenwich-st., New York, will be promptly attended to.

By order of the Board of Directors,
GEORGE BOMMER, Director.

New York, January, 1849.

☞The Factory will be in full operation early in the spring, and manure can be had in April next, and at any time afterwards. Feb. 1–tf.

LIME.

THE subscribers are prepared to furnish Building and Agricultural Lime at the depot on the Back Basin, corner of Eden and Lancaster-sts., which they will warrant to give satisfaction, it being burnt from pure Alum Lime Stone, equal to any found in the United States. Orders may be left with WILLIAM ROBINSON, No. 15 Hollingsworth-street, near Pratt.

feb. 1–tf. FELL & ROBINSON City Block

Hussey's Reaping Machine.

THE increasing demand for this implement has induced the subscriber to make larger preparations for the harvest than in any previous year, yet it will be necessary in order to avoid disappointment, that farmers send in their orders at an early day. OBED HUSSEY.

Baltimore, Jannary 18, 1849. Feb. 1

LIME—LIME—The subscriber is prepared to furnish from his depot at the City Block, Baltimore, ALUM STONE LIME of the purest description, deliverable at any point on the Chesapeake Bay or its tributaries, at such prices as cannot fail to please.

He is also prepared to furnish superior building Lime at 25c. per bushel, in hhds., or at $1 per bbl. E. J. COOPER,

july 1 City Block, Baltimore.

FOR SALE.—100 bushels of BONE SHAVINGS—by R. BALL,

feb 1–tf East Falls Avenue, near the Bridge, Baltimore.

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